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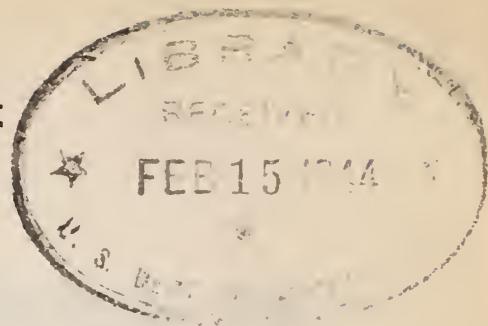
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UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS



Agricultural Economics Bibliography No. 36

THE GRAPE INDUSTRY

A Selected List of References on the Economic Aspects
of the Industry in the United States, 1920-1931

Compiled by Vajen E. Hitz
Under the Direction of Mary G. Lacy, Librarian
Bureau of Agricultural Economics

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Washington, D. C.
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This bibliography includes references to publications dealing with the economic aspects of the grape industry in the United States since January, 1920. The references cover not only grapes, but raisins, currant grapes, and a few grape products. Foreign publications have been omitted except some which deal with foreign markets for American products. The references are to publications in the library of the United States Department of Agriculture and to a few publications in the Library of Congress. The call numbers used in the library of the United States Department of Agriculture have been given in most cases.

The reports, proceedings, and transactions, from 1920 to date, of the horticultural societies of the principal grape-growing States were examined for important references to the economic aspects of the industry. No effort was made to search the statutes of each State for laws affecting the grape industry, but when such references were found they were included. The Agricultural Census for 1925 only has been included, as the publication of the returns from the 1930 Census had not been completed when this bibliography was compiled.

Since it was impracticable to search the files of all fruit periodicals for articles on grapes it seemed desirable to list with a full descriptive note the following periodicals which are suggested as sources for additional material:

The American Trust Review of the Pacific, the Associated Grower, the Blue Anchor, the C. V. A. Bulletin Fruit Service News, the California Cultivator, the California Fruit News, the California Grape Grower, the California Grower, the Grape Belt and Chautauqua Farmer, the Pacific Rural Press, the Sun Maid Business, and the Western Canner and Packer.

References to articles of interest in other periodicals have been entered under author and title.

Material on culture, varieties, and experimental work has not been included except when found in publications giving economic information.

Mary G. Lacy, Librarian,
Bureau of Agricultural Economics,
U. S. Department of Agriculture.
March, 1932.

SOURCES CONSULTED

Card catalogues of the following libraries:

United States Department of Agriculture.

United States Department of Agriculture, Bureau of Agricultural Economics.

Indexes:

Agricultural Economics Literature, v.1, no.1, Jan., 1927-v.5, no.8, Oct., 1931. Also its predecessor, Library Supplement to B. A. E. News (Issued by the Library, Bureau of Agricultural Economics, United States Department of Agriculture), nos. 1-38, Jan. 16, 1923-Dec. 28, 1926.

Agricultural Index, 1920-Aug., 1931.

Experiment Station Record, 1920-Sept., 1931.

Public Affairs Information Service Bulletin, 1920-Oct. 17, 1931.

Bibliographies:

Bercaw, Louise O., comp. Refrigeration and cold storage; a selected list of references covering the years 1915-1924 and the early part of 1925. Washington, D.C., October, 1925. 58 p. (U. S. Dept. of agriculture, Library, Bibliographical contribution no.10) Mimeographed.

Bercaw, Louise O., comp. State and Federal publications dealing with the marketing of agricultural products; a list of references to the printed publications of State and Federal departments of agriculture, markets, etc., issued since 1924. Washington, D.C., U. S. Dept. of agriculture, Bureau of agricultural economics, April 26, 1930. 61p. Mimeographed.

Day, E. L., Jacobs, Katharine, and Olcott, M. T., comp. Bibliography on the marketing of agricultural products. Washington, Govt. print. off., 1925. 56p. (U. S. Dept. of agriculture. Misc. circ. 35)

Rice, Katharine G., comp. Bibliography on the preservation of fruits and vegetables in transit and storage, with annotations. Washington, D. C., June, 1922. 76p. (U. S. Dept. of agriculture. Library. Bibliographical contribution no. 4) Mimeographed.

U. S. Bureau of Foreign and Domestic Commerce. Market research agencies; a guide to publications and activities relating to domestic marketing. Washington, Govt. print. off., 1930. 261 p. (Its Domestic commerce series no. 6). Also 1928 edition.

THE GRAPE INDUSTRY
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1. Anonymous.

California grape car plan. Car shortage prevented; congestion reduced, and marketing conditions improved. Railway Age 81:933-936. 1926. 288.8 R136

Excerpts in Railway Rev. 79:711-712. 1926. 288.8 R36

The provision of the California Grape Car Plan "formulated by the Pacific Coast Transportation Advisory Board and the Car Service Division of the American Railway Association to facilitate the handling of California grape shipments" and its success during the 1926 season are discussed in this article. The report of Donald D. Conn, submitted in November, is quoted relative to the interdependence of carrier obligation and trade practices.

A table shows "average daily loading for successive shipping weeks of 1926 as compared with the 'approved car requirements' made up from the advance estimates and the cars furnished in the corresponding weeks of 1925."

2.

The California grape industry. Better Fruit 23(5): 9-10. Nov., 1928. 80 B16

A biographical sketch of Donald D. Conn, with mention of some achievements of the California Vineyardists Association since he became its managing director in 1926.

3.

California grape surplus gets a big hand from Uncle Sam but the benevolent Farm Board can't inquire too closely into what's going to become of it. Business Week, June 11, 1930, p. 25-26. 280.8 Sy8

This article names those of the required 85 per cent who have already signed up since the announcement in February of the Farm Board Plan for the rehabilitation of the California grape industry, and mentions the counter proposal to pull up 25 per cent of the vines, rejected by the Farm Board, and discusses the formation of Fruit Industries, Inc.

4.

Chautauqua belt grape growers' association. Foods and Markets 3(29-30): 9-10. Jan.-Feb., 1921. 280.38 F73

This is an account of the cooperative movement among grape growers of the Chautauqua belt from 1918 until their reorganization March 1, 1920, with the incorporation of the Chautauqua and Erie Grape Growers' Cooperative Association, and the result the following season.

5. Anonymous.

The cooperative raisin growers. Natl. City Bank of New York [Mo. Bul.] Apr., 1923, p.56-57. 252 Un31

This article attributes the success of the Sun Maid Raisin Growers as a cooperative business to the development of the demand for raisins and mentions a reorganization "now being made to enable it to cope more effectively with the increasing volume of production." A table gives figures for tonnage handled by the Association, aggregate volume of production handled, and prices per pound f.o.b. California, 1912-1922, with estimated tonnage handled 1923.

6.

Dry Bureau permits use of grapes. U. S. Daily 5(131):1. Oct 3, 1930. 280.8 Un33

An account of a statement of the Director of Prohibition, Amos W. W. Woodcock.

7.

Farm Board wins grape control but it may be costly victory: California producers sign contracts reluctantly, pessimistic in face of heavy over-production. Business Week, Aug. 13, 1930, p.24-25. 280.8 Sy8

Reports the completed sign-up of 85 per cent of grape acreage necessary to make effective the stabilization program of the Federal Farm Board of the California grape industry, and the obstacles which caused the campaign to last nearly four months instead of the six weeks originally planned.

8.

Grape growing in Florida. Amer. Florist 64:39. Jan. 17, 1925. 80 Am33

The opportunities offered for building a grape industry in Florida, and the development of the industry in Polk County, Florida are set forth in this one-page article.

9.

Grapes of 1925. Market Growers Jour. 38:265. Mar., 1926. 6 M34

This short article quotes in part the report showing increase in grape shipments in 1925 over 1924, filed with the Atlantic State Shippers Advisory Board by E. J. Cleave, district manager for New York, American Railway Association.

10.

Had to use middlemen! Who is Who in Grain and Feed 19(9):20. Mar. 5, 1930. 225 W62

Editorial announcing "acceptance of an offer of the National Food Brokers Association for the sale of Sun-Maid products," a departure from the nine-year-old policy of the Sun-Maid Raisin cooperative of selling direct to the trade.

11. Anonymous.
I. C. C. examiner approves grape car plan with changes. Railway Age 83:21-22. 1927. 288.8 R136
Summarizes complainants' objections to the Grape Car Plan of 1926, and the plan as proposed with changes for 1927.
Quotes extracts from a report following an investigation by John L. Rogers, special examiner for the Interstate Commerce Commission, in which he suggests modifications.

12. Jolly wine grapes roll eastward to market. Business Week, Sept. 7, 1929, p. 38, 40. 280.8 Sy8
An article on the auction selling of California wine grapes in the Pennsylvania Railroad's Manhattan Produce Yard written just after the beginning of the 1929 auction on September 3. Figures show 1928 shipments and prices, with estimates for 1929.

13. "Little Sun-Maids" are advertising in British Isles; \$200,000 spent on initial marketing campaign of four months. Printers' Ink 120(3):64, 68. July 20, 1922. L. C.
This article quotes Stanley Q. Brady, who personally supervised the Sun-Maid Raisin Growers' advertising and marketing campaign in the British Isles, beginning September 1, 1922, which used the five-cent package (a "marvelous marketing achievement" in the United States) "as the entering wedge."

14. Marketing northern grapes. Amer. Fruit Grower 42(1):27. January, 1922. 80 G85
The results of a study of the Northern grape industry and its problems by marketing specialists of the United States Department of Agriculture.

15. Raisins and the market. Commerce Mo. 7(2):28-30 June, 1925. 286.8 C7322
The effect of the expansion of the Australian raisin industry since the war upon the industry of the United States is discussed. Tables give figures for raisins, 1909-1924, as follows: estimated United States production, net exports and balance available for consumption and carryover; and exports from the United States and imports into the United Kingdom, by countries.

16. World's largest vineyard uses machinery and chemical control. A California community of over two thousand five hundred depends on grape by-products which can be legally sold. Sci. Amer. 141:240-241. Sept., 1929. 470 Sci25
The story of Guasti, Calif. "a town devoted to a single industry", told in pictures.

17. Adams, R. L.

Farm management notes (for California). 7th ed., 182p.
Berkeley, Calif. Distributed by Associated students' store,
University of California. 1921. 30.2 Adl

"Selected farm management literature (for students),
p. 179-182.

Part II, Methods and Costs of California Crop Production,
p. 23-97.

Raisin grapes and Table grapes, p. 52-55. Notes on Requirements, Methods of Growing, and Costs, include climatic, soil, and water requirements, setting and caring for vineyards to maturity, calendar of operations, care of bearing vineyards, harvest, gross yield per acre, percentage of different grades (for table grapes), by-products, and major producing counties. Tables of the operating costs of an average acre of raisin grapes, and of table grapes, give cost and price data "normal" and "high" for a pre-war year (1915-16), and a war year (1918-19). Major items in these tables are market prices for land, cost of establishing a vineyard, costs from setting out to self-sustaining age, annually, costs of mature vineyard, annually, costs of harvesting and marketing, per ton and per container, farm returns from product per pound f.o.b. (per crate and per ton for table grapes).

Average rate per day, per man, for setting rooted grape vines, setting cuttings, sulphuring, tying young vines, and picking grapes for shipment are given on p. 128.

Estimated production during 1920, value per unit, and total value of raisins, wine and table grapes Dec. 1, 1920; and bearing acreages of raisin grapes, 1920 crop, are given in tables (p. 15, 16) giving fruit and nut crop statistics for California.

18. Agnew, H. E.

Suggested limitations of Federal trade commission for marketing associations. Printers' Ink 115:153. 1921. 280.3 M38R
Not examined.

19. Alleman, Dudley.

Marketing eastern grapes. U. S. Dept. Agr. Bul. 861, 61 p.
1920.

"This bulletin deals with the marketing of labrusca grapes, known commercially as Eastern grapes ... represented by the Concord, the Niagara, and the Catawba." In addition to the commercial varieties (p. 5-8), the rise and fall of commercial production, changes in market outlets, methods of preparation for market, market preferences, and distribution are discussed, and leading producing sections are described as to location and extent, history, marketing methods, etc.

An appendix gives data compiled from the daily telegraphic reports of the carriers to the Bureau of Markets, showing destinations of car-lot shipments of eastern grapes from each important producing section.

Tables 1-10 show: Car-lot shipments of eastern grapes, by States, and carloadings at the various stations in the Chautauqua-Erie Belt, the Central Lakes district of New York, the Hudson Valley of New York, the Ontario shore district of New York, Michigan, Ohio, the Middle West, the Atlantic States, and in the Northwest, as reported to the Bureau of Markets by the various originating railroads (and boat lines for Hudson Valley stations), for 1916, 1917, 1918 and 1919.

20. Allen, A. W.

Chemical engineering methods in processing dried fruit. Chem. and Metall. Engin. 30: 10-12. 1924. 381 E12

This is an illustrated article comprised of "condensed abstracts from company publications, contributed in large part by E. J. Hearhart, of the manufacturing division, supplemented by additional data and comments, the outcome of a visit to the plant at Fresno," one of the twenty-eight stemming or packing plants of the Sun-Maid Raisin Growers Association. Varieties handled and subsidiary processes are mentioned.

21.

Industrial alcohol and byproducts from raisins. Probable slump in California grape industry prevented by establishment of new outlets made possible largely through application of chemical technology. Chem. and Metall. Engin. 32:675-678, illus. 1925. 381 E12

This article describes the pioneer work in the field of production of industrial alcohol and carbon dioxide at the plant of the Mason Byproducts Company at Sausalito, Calif.

22. Allewelt, W. F.

Revision of the United States standards for table and juice grapes recommended for the 1928 season. Calif. Dept. Agr. Mo. Bul. 17:389-396. Sacramento, 1928.

Gives specifications recommended for the 1928 season, as revised standards for table and juice grapes, with especial reference to California.

23.

Fruit and vegetable standardization legislation, 1929. Calif. Dept. Agr. Mo. Bul. 18:339-345. Sacramento, 1929.

Gives the general provisions of various bills which amend the California Fruit, Nut and Vegetable Standardization Act of 1927.

The provisions of Section 22, Senate Bill No. 683, Ch. 699, which makes a number of changes in the specifications of the various standards for grapes, are given on p. 342-344.

24. American Institute of Cooperation.

American cooperation: collections of papers and discussions comprising the third, fourth, and sixth summer sessions of the American institute of cooperation, 1927-1928, 1930. Washington, D.C., American institute of cooperation [1927-1930] 2 v. each. 280.29 Am3A

For addresses and discussions on grapes and raisins see the following:

1927, v. 2. The California Grape [Clearing House] plan, by W.D. Bennett, p. 578-583; 1928, v. 1. Organization of the Sun-Maid Raisin Growers of California, by J. L. Read, p. 189-190; Operation of the Sun-Maid Raisin Growers Association, by A. M. Paul, p. 190-191; Organization and Operation of the California Vineyardists Association, by Leo Monahan, p. 207-209; Membership Policies of the Sun-Maid Raisin Growers, by F. A. Stewart, p. 255-257; 1928, v. 2. Standardization of Raisins, by P. F. Nichols, p. 34-39.

For references to grapes and raisins consult indexes.

25. American Railway Association.

Damages to fresh fruits, melons and vegetables; recovering and salvage handling of broken packages at destination points. Presentation and consideration at special meeting, American railway association, Chicago, Ill. May 15, 1930. 28 p. [New York] 1930. 280.3 Am37

Appendix to 1930 Report of Committee on Freight Claim Prevention, American Railway Association, Freight Claim Division.

Grapes are included in a table on p. 28 giving cars originated, value of loss and damage, and value of loss and damage per car of fresh fruits, melons, and vegetables, 1929.

26. American Trust Review of the Pacific [monthly] v.12-18, no.5, Jan.15, 1923-May 15, 1929. San Francisco. 1923-29. 286.8 M533
Ceased publication with v.18, no.5.

Published by the American Trust Co. (merger of the Mercantile Trust Co. of California and the American Bank). V.12-13, no.5 (Jan. 15, 1923-May 15, 1924) have title: Monthly Review, Mercantile Trust Co. of California. V.13, no.6-v.15 (June 15, 1924-Dec. 15, 1926) have title: Mercantile Trust Review of the Pacific.

This Review consists of unsigned articles which give agricultural statistics from official sources. The following articles which contain various figures for prices, acreage, production, value, shipments, etc. deal with grapes: Acreage of Wine Grapes Expands and Price Jumps since National Prohibition (v.12, p.14-17); Slack Late Season Demand Breaks Prices of California Juice Grapes (v.14,p.276-278); Improved Methods of Shipping and Marketing Proposed for California Fresh Grapes (v.15,p.266-269).

Raisins are discussed in the following article: Increased Use of Dehydrates for Drying Crops of Prunes, Raisins and Walnuts (v.17, p.41-44). Numerous articles dealing with the export trade of San Francisco, California, or the Pacific Coast contain compilations of exports which include raisins.

Several articles deal with the California canned fruit packs and include grapes in statistical compilations of California canned fruit and vegetable packs. They are as follows: Conditions and Prospects of Canned Vegetable and Fruit Packs in California (v.14, p.154-159 and 175-178); California Canned Fruit and Vegetable Output in 1926 Exceeds all Previous Records (v.16, p.44-46); and California Canned Fruit and Vegetable Pack of 25,504,615 Cases Falls Below 1926 Output (v.17, p.142-143).

Articles which deal with export trade of fresh fruits, including grapes in tables of exports from San Francisco and Los Angeles, are as follows: Foreign Shipments of California Fresh Fruits Make Big Gain in Five Months of 1927 (v.16, p.174-176); Fresh Fruit Exports from California Increase Nearly Twice in Value over 1926 (v.17, p.94-95); California Fresh Fruits Shipped Abroad Bring \$2,038,313 in First Six Months of 1928 (v.17, p.228-230).

Several articles dealing with crop conditions and returns contain information on grapes as follows: Short Crops and Growing Demand Bring Higher Prices for California Fruits.-(v.13, p.238-240). Contains a section on the grape situation and one on raisin production, and a table giving carload shipments of grapes by varieties, 1921-1924, with other figures for prices, etc. in the text; California Crop Values Exceed Those of 1923 Despite Adverse Conditions. (v.14, p.14-20). Contains a section entitled Big crop of grapes, and a table which includes value of wine and table grapes and raisins among twenty most important California crops, 1923 and 1924; California Farms and Orchards Produce Best Financial Return since 1920. (v.15, p.8-11). A table gives farm prices of California crops 1919 to 1925, including raisins and wine and table grapes; Pacific Slope Produces Thirteen Per Cent of Crops of United States (v.15, p.74-78). A table gives the principal field crops of the eleven Western States for 1924 and 1925, the value of each crop, the farm value per unit and the relative value of each 1925 crop to the same crop of 1924; Western Fruit Crops will be larger than those of last year (v.17, p.151-153). Acreage of grapes by varieties, 1927 and 1928 is included in a table; California Fruit and Field Crops Show Increase in Value over 1927 (v.18, p.36-42). Table gives harvested tons, value per ton, and unharvested tons of grapes, by varieties; and Returns from Washington's Leading Industries Show Increase over 1924 (v.15, p.106-110). A table of Washington crops includes production and farm value 1924 and 1925 of grapes.

Other articles which include grapes are as follows: Late Frost Injures California Deciduous Fruit and Nut Crops. (v.18, p.86-88). Effect on Grape Crop Discussed; Growers Obtain Reduction in Freight Rates on California Deciduous Fruit Shipments (v.16, p.205-207). Table shows increase in acreage, production, and shipments of California deciduous fruits from 1921 to 1926 and the accompanying drop in prices; Development of California in the Eighties; Expansion of Horticulture (v.13, p.276-278). Discusses early grape production, progress of viticulture, growth of raisin crop, and regions that produced wine, including various statistics, as yield per acre 1890, value of California vineyards 1880, prices 1881, 1890, etc.; and California Prices and Media of Exchange in Days of Gold Rush (v.12, p.171-176). Table includes average wholesale prices (auction sales) of grapes, 1849.

27. Arizona University, College of Agriculture, Agricultural Extension Service. An economic survey of Salt River Valley project in Maricopa County, Arizona. Ariz. Agr. Col. Ext. Circ. 59, 117p. Tucson. 1929.

This survey, the purpose of which was to "assemble facts pertinent to the economic status of agriculture in the Salt River Valley Project, from which to determine an agricultural policy or program to guide its future development" - was carried on cooperatively by the Bureau of Agricultural Economics of the United States Department of Agriculture, the Arizona Agricultural Experiment Station, and others.

Report of the Dates and Grapes Committee, p.104-107.

28. Armentrout, W. W.

Adjusting agricultural production and distribution in the Wheeling area to meet home market demands. W. Va. Agr. Expt. Sta. Bul. 228, 28p. Morgantown. 1930.

Grapes, p.21. Table 14, p. 24, Receipts of grapes in Wheeling by freight: origin of shipment (Pittsburgh, California and New York) quantity, and carrying charges by months, June, 1925, to May, 1926, inclusive.

29. Associated Grower [monthly] v.1-6; Mar. 1920-Dec. 1924. Fresno, Calif., 1920-24. illus. 80 As?

Published by the California Associated Raisin Company and California Peach Growers, Inc. (later California Peach and Fig Growers).

Formed by the consolidation of the Sun-Maid Herald, published by the California Associated Raisin Company, and the Blue Ribbon Peach News, published by the California Peach Growers, Inc.

The annual financial reports of the California Associated Raisin Company, 1920 and 1921 are to be found in v.1, no.9, November, 1920 and v.2, no.12, December, 1921. The report of the Sun-Maid Raisin Growers, 1922, is in v.4,no.1, January, 1923. The 1922 report contains a comparative statement of State production, and production handled by and price paid by the Association for raisins, 1913-1921, by varieties, with similar tables in reports for 1920 and 1921. In addition, 1920 and 1921 contain detailed statements of settlement with growers, by varieties.

Contains the following departments: Manufacturing Department's Activities, by G.G. Watson, in v.1,no.1-7, 1920; A Thumb Nail History of Our Plants and the Men that Make Them Go, in v.2,no.2-11, 1921; and Around the World with Sun-Maid, in v.6,no.1-11, 1924.

V.1-2, March 1920-December 1921, each contain an index and v.3-4, 1922 contains an index. Aug., 1923 not published.

Production, cost of production, prices, and other statistics are contained in both signed and unsigned articles. Most of these articles relate to the California Associated Raisin Company, later the Sun-Maid Raisin Growers, and include information about policies of the association, officials, progress in sales, promotion schemes, advertising, the raisin suit, the reorganization of the association, etc. Quite a few articles relate to Sun-Maid sales in foreign countries and foreign competition.

30. Barnett, R.J.

Grape growing in Kansas. Kans. Agr. Expt. Sta. Circ. 134, 32p. Manhattan. 1928.

Includes names of varieties for commercial use, cost of trellises (p.15), harvesting and packing (p.25-27), and uses of grapes (p.27).

31. Bauer, Walter.

Greek currant legislation and its effect on California raisin markets. 16p. [Washington, D.C., 1930] Typewritten. Pam. Coll.

The library of the United States Bureau of Agricultural Economics has also 23 typewritten English translations of legislation, agreements, regulations, extracts, etc.

32. Bell, R. H.

Grape culture in Pennsylvania. Penn. State Col. Ext. Circ. 81, 11p. State College. 1920.

Picking, packing and marketing (2 paragraphs), p.10-11.

33. Bercaw, L. O., comp.

California; an index to state sources of agricultural statistics.

U.S. Dept. Agr., Bur. Agr. Econ., Agr. Econ. Bibliog. 31, 5 pts. 1930-1931. Mimeographed.

Part 1, Section 1-2.- Fruits, Vegetables and Nuts; an Index to the Official Sources.

Section 1. contains references to sources of grape statistics as follows: acreage, acreage (Japanese); consumption; cost of dipping and spreading, of grafting, marketing, production, pruning, pinching and topping vines, supports and vineyards; drayage cost (p.15); freight rates; income possibilities (p.3); number of vines, number of vines raised in nurseries, and number of vineyards; price; production, and losses in production; purchasing power; refrigeration rates; sales; shipments; unloads; value, value (Japanese), losses in value, value of shipments, and value per acre; yield per acre; drying ratios; dates of shipments, frosts, ripeness, and of market report publications; portion utilized as human food; normal sales; and value and yields of a ton of grapes, p. 3, 15-16, 176-214.

Freight rates, and number of grape cuttings, p. 215; pack; shipments; and value of canned grapes, p.215-216; production; returns; shipments; and value of dried grapes, p.216-218; production of grape products, p.218; cost of production, imports, production, shipments, and value of grape juice, p.218-219; cost of production, and production of grape syrup, p. 219; shipments of lees, p.219; capital invested in wine growing, freight discharged and loaded, freight rates, imports, price, production, receipts, sales, shipments, stocks on hand, value, and value of imports and of shipments of wine: p. 219-238.

See also p. XXXVI - XXXIX for list of publications indexed.

Section 2 contains references to sources of raisin statistics as follows: Consumption; cost of production; freight rates; imports; price; production, and losses in production; purchasing power; sales; shipments; value; losses in value; value of shipments; yield per acre; distribution of crop; portion utilized as human food; profits and expenses; normal sales; and warehouses, p. 424-441.

Also contains references to sources of currant statistics as follows: acreage, imports, production, shipments, value, canned pack, etc., and to statistics of dried currants as follows: price, production and value, p. 451-454.

Part V. An Index to Some Unofficial Sources, compiled under the direction of M. J. Abbott, contains references to sources of statistics as follows: cost of production and shipments of grapes and raisins; prices of grapes, grape juice, and raisins; acreage, and distribution of grapes; freight and refrigeration rates on grape juice; and consumption, exports and imports, production, and receipts of raisins.

34. Berger, A. C., and others.

Agricultural production and marketing in Lebanon County, Pennsylvania, for the purpose of furnishing an economic basis for the production and marketing program. Penn. Agr. Expt. Sta. Bul. 198, 48p. State College. 1925.

Table 16 (p.34), Receipts of fruits and vegetables (including grapes) at Lebanon, July, 1923 to June, 1924.

35. Bioletti, F. T.

Basis of grape standardization. Calif. Agr. Expt. Sta. Circ. 293, 15p. Berkeley. 1925.

Contains facts from an investigation made by the Division of Viticulture and Fruit Products of the College of Agriculture of the University of California during the shipping season of 1918. The object of the investigation was to find out what constitutes proper standardization and the guiding principle "was to compare judgments of the consumers with the readings of the Balling Saccharometer and from the data thus obtained to try to discover how far they agreed and whether the 17° Balling or 16° Balling standard was suited to attain the objects of the law or whether it should be changed for all grapes or for grapes of some varieties or for some localities." There are three tables and three diagrams showing results.

36.

Elements of grape growing in California. Calif. Agr. Col. Ext. Circ. 30, 36p. Berkeley. 1929.

Viticultural regions of California, p. 7-12; principal varieties of raisin, table and wine grapes of California, including a table (p.32) which shows number of carloads of varieties of juice grapes sold and average price per lug in 1927 (from Marketing California Grapes, by E.W. Stillwell and W.F. Cox, U. S. Dept. Agr. Circ. 44, 1928), p. 27-36.

37. Bioletti, F. T.

Quality in grapes. Sci. Mo. 28:393-400. May, 1929. 470 Sci23

A chart shows the relation of quality of four varieties of California table grapes and two varieties of raisin grapes shipped as table grapes in a limited way, to net returns, calculated from market quotations, New York City, 1923.

"Emphasizing the fact that high quality in grapes is not necessarily associated with high selling values because of inferior shipping quality, public preference, etc. the author discusses the various factors - appearance, color, size, form, flavor, taste, aroma, and texture - which go to make up quality, and also considers the means such as pruning, training, and ringing which develop the best possible quality in grapes." Expt. Sta. Rec. 61:528. 1929.

38. The Blue Anchor; published monthly by the California Fruit Exchange in the interests of its members. v.1,no.1-v.8,no.9; Mar.1924-

Sept.1931. illus. Sacramento. 1924-31. 286.83 B62

This set is indexed.

A series of articles appearing monthly in v.2,1925-v.5,no.10, October, 1928, deal with the various cities of the United States and Canada as markets for fruits, including grapes. These give Government figures for unloads, and in some cases the number of cars sold by the Exchange in the different cities. Other articles include grapes in the discussion and a good many deal entirely with grapes. These cover such subject matter as the following: condition of arrivals of California grapes on the various eastern markets, varieties in demand, and factors influencing price and demand; the grape deals and market outlook for grapes, giving figures for shipments, unloads, prices, etc.; the grape industry in foreign countries and foreign markets as outlets for California grapes, including figures for land valuation, acreage, production, and value of the crop in foreign countries, prices in European markets, etc., and giving seasons of shipment, methods of grading, freight charges, etc.; prices, including tabulations; the grape car plan; the clearing house; freight rates; packs; labels; standardization; information relative to the Exchange, etc.

39. Boles, A. P.

Harvesting the Missouri grape crop. Missouri Agr. Col. Ext. Circ. 160, 15p. Columbia. 1925.

"It is with the idea of helping to establish a uniform grade and pack" in the State of Missouri "that this circular is written". Proper time and method of picking, wilting, grading and packing, field and shed pack, packages, hauling and loading are included.

40. Booth, J. F.

Farmers' cooperative business organizations in New York. N. Y. Cornell Agr. Expt. Sta. Bul. 461, 123p. Ithaca. 1928.

This bulletin contains information relative to the development and the present status of farmers' cooperative business organizations in New York with emphasis "on reasons for the success of some associations and on the causes of the failure of others," obtained from an intensive study of all active and inactive associations in ten representative counties.

Cooperative marketing of grapes, p. 26-32. Five grape marketing associations and an international grape association are discussed in detail and several others briefly. Table 14 (p. 30), Volume of business (number of cars shipped and total returns to growers) handled by the Chautauqua and Erie Grape Growers' Cooperative Association Inc., 1901 to 1924.

41. Bowman, F. E.

Harvesting grapes. Ark. State Hort. Soc. Proc. 47(1926):52. 1927.
81 Ar4P

Includes some figures for costs of harvesting.

42. Bralliar, F. B.

Suitability of grapes for general culture in the states of the old South. 35p. Nashville, Tenn., George Peabody college for teachers [1922?] L. C.

Bibliography, p. 33-34.

Successful plantations in the South, mainly in Tennessee, are discussed on pages 11-12. Figures for average profit per acre for one plantation in North Carolina, and yields per acre in the vineyard at the Nashville Agricultural and Normal Institute are included. A table (p. 32) gives average production per vine in pounds for New York and nine southern States, data furnished by the various State horticulturists and from United States census reports.

Contains a brief, historical introduction, and general information about early attempts at grape growing in the South, and early southern breeders.

43. Brand, C. J.

A picture of the fruit and vegetable industry. American institute for agriculture. Marketing fruits and vegetables, Lesson 1, 64p. Chicago. 1923. 280.3 Am34F

A discussion of the grape crop (p. 24-25) contains figures for California and New York shipments, 1922, with total shipments for 1921, and a map showing acreage of grape vines, 1919, by States.

Tables I and II include statistics for car-lot shipments, 1916, and value, 1919 and 1921, of grapes.

44. Breithaupt, L. R., and Haley, R. M.

Union County home markets survey; a study of the relationship between consumer demand and local supply, market conditions, and related facts. Oreg. Agr. Col. Ext. Bul. 411, 94p. Corvallis, 1929.

Information relative to grapes (p.25) includes a graph showing consumption, supply, and price trends, and a table giving monthly volume of consumption for 7 stores based on an accurate record, and estimates for 8 other stores and for all stores, and prices per lug (recorded purchases) for 7 stores, July-Jan., 1928. A table (p.71) gives annual requirements for consumer demand of fruits, including grapes in lugs, as given by 5 selected stores, Oct. 1927-Sept. 1928 inclusive, and 1928 estimates of 35 La Grande stores, 28 country stores and all Union County stores. A table (p. 69) gives percentage of families reporting purchases of food products, including grapes from sources as follows: store, direct from farmers, peddlers, and home grown.

45. Brevit, S. L.

Sales plan gives vineyardists first "farm relief" benefits. As told to S. Lewis Brevit by Donald D. Conn. Sales M_{an}gt. 19:107, 135. July 20, 1929. L. C.

Outlines five steps in the industry's program of production, sales and distribution of California grapes, raisins, and by-products. One of these is the formation of Fruit Industries, Inc. Its four avenue of control in the marketing and distribution of table and juice grapes are enumerated. Another step in the program is the newly formed Federal Grape Stabilization Corporation which, among other things, provides for the purchase of the entire raisin crop on a three year contract basis, beginning with the crop of 1929. The scale of base prices which producers will receive under this provision are given.

46. Bureau of Railway Economics.

Monthly shipment of fresh fruits and vegetables, United States. Average of the three years 1924, 1925 and 1926. Bur. Railway Econ. Bul. 27, 28p. Washington. 1928. Folio 284.3 B89

This bulletin is a study of the movement of 33 fresh fruits and vegetables (including grapes) in the United States during the calendar years 1924, 1925, and 1926.

"For each fruit or vegetable, for all fruits and all vegetables, and for the fruits and vegetables combined, statistics are presented showing the total annual movement (p.3), the seasonal movement by months (p.6), and the movement by states (p.27)." The analysis of grapes (p.8) brings out "the seasonal movement by principal producing states or groups of states... The basic information unless otherwise specified, is taken from compilations made by the United States Department of Agriculture, Bureau of Agricultural Economics, from reports furnished by the railways of the United States." p.3.

47. Bureau of Railway Economics.

Unloads of fresh fruits and vegetables at sixty-six important consuming markets in the United States, calendar year 1929. Bur. Railway Econ. Bul. 39, 28p. Washington. 1930. 284.3 B89

"While the study is designed primarily to show the source and rail distribution of 18 principal fresh fruits and vegetables [including grapes] to 66 large markets in the United States [arranged according to geographical divisions] during the calendar year 1929, it also shows for these 18 commodities the total rail shipments and the relationship of unloads in the 66 markets to total rail shipments... [with comparable data for 1927 and 1928]. Imports of these commodities into the 66 markets, and truck shipments, where reported, are also given.

"The basic information throughout this bulletin, unless otherwise specified, was taken from compilations made by the United States Department of Agriculture, Bureau of Agricultural Economics." p.2.

Similar information for 1927 and 1928 is contained in Bureau of Railway Economics, Bulletins No.31 and No.37. Bulletin No.20, entitled, Production and Movement of Fruits and Vegetables, United States, 1925, issued April, 1927, is a study of the production, rail shipments, and unloads at 36 large markets, of 16 fruit and vegetable crops (including grapes) in the United States during the year 1925.

48. Butler, Hugh, and officers of the United States Department of Commerce and Department of State.

The United Kingdom; an industrial, commercial, and financial handbook U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser.94, 953p. 1930. 157.54 T67

Quantity, 1926 and 1927 and value 1926-1928 of raisins from the United States (from Commerce Yearbook) are included in a table on p. 541; value of total imports, imports from the United States and United States per cent of total 1913, 1924, 1927, of raisins (source: Annual Statement of Trade of the United Kingdom) in a table of imports into the United Kingdom, p.500; quantity and value 1926-1928 of grapes and currants in a table of imports of fresh fruit into the United Kingdom, p.482 (from statistics of Empire Marketing Board).

On p. 489 is a short paragraph on grapes in demand which gives countries furnishing grapes to the United Kingdom, and mentions failure of attempts to import grapes from the United States.

49. Butner, R. C.

Grape inspection a material aid to fruit auctions. U. S. Dept. Agr. Yearbook 1927: 349-350.

A brief account of a new line of grape-inspection work started in Chicago, August, 1926, "the first undertaken in connection with produce to be sold through a delivered auction."

50. California, Department of Agriculture.

Airplane dusting for grape mildew. Calif. Dept. Agr. Mo. Bul. 19:520. Sacramento. 1930.

A brief account of experimental dusting of vineyards in Kern County, including figures for quantity of sulphur used and cost per acre.

51. California Department of Agriculture.

Annual report. [1st] -7th, 1919/20-1926. Sacramento. 1920-26. (No. Bul. v.9-15. Oct./Nov. 1920; Nov./Dec. 1921; Nov./Dec. 1922; July/Dec. 1923; July/Dec. 1924; July/Dec. 1925; July/Dec. 1926.)

Includes reports of the Viticultural Service by R. L. Nougarct. During 1919/20-1922 the Viticultural Service was a part of the Division of Plant Industry. During 1923 it was a separate division, and from 1924 to 1926 it was a part of the Bureau of Plant Quarantine and Pest Control.

1919/20 contains a summary of the work accomplished during the season including the following phases: State cooperation with grape growers, increase in area and value of vineyards, misnaming varieties of grapes, and shipping, packing and storage of grapes. (p.487-492).

1921 contains, in addition to other items, comment on statement made regarding increase of shipments of wine grapes in 1921 over that of 1920, with statistics showing tons of grapes used for dry wine, shipments interstate and local as fresh grapes and estimated tonnage of interstate shipments alone of wine grapes as fresh grapes in 1921 (p.627-628); a discussion of frost damage to the 1921 crop, with table showing dates of damaging frosts in 1921 (p.628-631); a discussion of legislation enacted in 1921 of interest to the California industry. (p.637-639), which includes copies of Section 10 from Statistics of 1921, Chapter 719, and of Senate Bill No. 247.

1922 contains a section entitled, Car shortage serious menace to grape industry (p. 873).

52.

California crop reports for the years 1920-1928. Calif. Dept. Agr. Spec. Pub. 9,16,33,43,55,63,74,86, and 96. Sacramento. 1921-1929.

Issued by the California Cooperative Crop Reporting Service, a "State unit of the Division of Crop and Livestock Estimates, Bureau of Agricultural Economics, United States Department of Agriculture, cooperating with the California State Department of Agriculture,"

1923 (with similar tables in 1925-1927) contains the following statistical information relative to grapes by classes: estimates of tonnage left on the vines, 1925 to 1928 (p.33); production, farm value (as of December 1) per unit and total, 5-year average (1924-28 (p.36-37); summary of California grape acreage, 1929, and estimated bearing acreage, 1919 to 1929, inclusive (p.44-45); forecast of bearing grapes, 1929, 1930 and 1931 (p.46); and estimated acreage, bearing and non-bearing 1929 (p.54) and planted 1927 and 1928, by counties (p.55).

1920-1924 contain tables giving production and farm value figures for grapes; 1923-24 contain estimated acreage and figures by counties and 1924 also contains the summary of California grape acreage.

1928 (with similar tables in 1926 and 1927) also contains the following statistical tables pertaining to California: interstate shipments of deciduous fruits in car lots, 1895 to 1928, inclusive, including grapes; estimated production of dried fruits and nuts, 1890 to 1928, including raisins in tons; and comparative packs of canned fruits, 1895 to 1928, inclusive, including grapes in cases.

California Crop Reports for 1921 and 1923-1928 are also published in California State Department of Agriculture Annual Reports for those years.

53. California, Department of Agriculture.

California grape syrup. 2p. Sacramento. 1920. Pam. Coll.

California grape syrup is of a distinctive character and a pure product, says this leaflet which also enumerates some of its uses.

54.

United States standards for grapes 1930. Calif. Dept. Agr. Spec. Pub. 102, 13p. Sacramento. 1930. 2 C121S

Drafted with especial reference to California grapes.

Issued by California Federal-State Inspection Service, Fruits and Vegetables, State of California, Department of Agriculture, in cooperation with United States Department of Agriculture, Bureau of Agricultural Economics.

For earlier editions 1924-1929 see California State Department of Agriculture, Special Publications, Nos. 46, 57, 66, 76, 89 and 95.

55. California, Department of Agriculture. Division of Markets.

Official list of produce dealers and deciduous fruit dealers... prepared by Fred N. Bigelow. 23p. Sacramento. 1929. 225 C12

This list of dealers bonded and licensed under the Produce Dealers Act, Chapter 860 of the Statutes of 1927, and Chapter 344 of the Statutes of 1929, contains the names of the dealers and their addresses, and indicates the commodities handled.

56. California, University, College of Agriculture. Agricultural Extension Service.

The 1931 agricultural outlook for California. Calif. Agr. Col. Ext. Circ. 52, 59p. Berkeley. 1931.

Paper No. 15. The Giannini Foundation of Agricultural Economics.

Prepared under the direction of H. R. Wellman in collaboration with E. W. Braun, S. W. Shear, and E. C. Voorhies. Grapes, p.12-16.

57. California, University, College of Agriculture. Division of Farm Management.

Common labor needs of California crops (with special reference to Mexican labor) 46p. Berkeley. 1931. Mimeographed. 283 C12.

"The purpose of this publication is to review and weld together certain findings resulting from an extensive survey of the need for common labor in connection with the maintenance and development of California agricultural enterprises, with special reference to the Mexican. This requires a consideration of the kind and amount of labor needed by California farmers, when and where this labor is needed, and the best available means, in the light of our present knowledge, of getting it." p.1.

Three tables arranged according to type of business include grape farms as follows: percentage using different kinds of labor other than white, based on 933 records (p.19); percentage of employers preferring whites, Mexicans, Filipinos and Japanese, 39 replies (p.27); and percentage of employers reporting "no effect," "presents difficulties," and "probably would help" to placing Mexicans upon a quota basis, 195 replies (p.33). Also labor requirements (work per man day and total number of man days) for pruning vineyards, collecting and burning brush, and picking juice, raisin, and table grapes (compiled from data collected over a period of years by workers in Farm Management) are included, p. 4-5.

58. California Associated Raisin Company, and others.

United States of America before the Federal Trade Commission. In re California associated raisin company; investigation upon application of attorney general under section 6(c) of the Federal trade commission act. Brief filed in behalf of American Seedless Raisin Company, Bonner Packing Company, Rosenberg Bros. & Company, Guggenheim & Company, Chaddock & Company. 69p. Washington, D. C. 1920? 95 Cl22

A brief filed by the attorneys of competing companies of the California Associated Raisin Company, stating facts and giving their arguments as to why the California Associated Raisin Company "has secured a monopoly not only of the production, but also of the manufacture and distribution of raisins in this country," has "bought out competitors, employed methods of coercion, refused to sell its product in restraint of trade... manipulated its prices... entered into price-fixing arrangements," etc., in violation of the anti-trust laws.

59. California Cultivator and Livestock and Dairy Journal [weekly] v.9, no. 10-v.77, no.15; Oct. 1895-Oct. 10, 1931. Los Angeles. 1895-1931. illus. 6.012

V.9-13 have title, California Cultivator and Poultry Keeper, and are monthly. V. 14 to v. 47, no. 11 have title: California Cultivator.

"Gives general agricultural news of California with special reference to Southern California. Market page is very similar to that of the Pacific Rural Press... There is an index in each volume." - U.S. Dept. Agr., Bur. Agr. Econ., Agr. Econ. Bibliog. no. 31, pt. V, p. VII.

The market page gives prices of grapes on the Los Angeles markets, and grapes and raisins on the San Francisco markets, by varieties. The later numbers include also the New York markets.

Contains numerous news items and articles relative to the grape and raisin industry.

60. California Development Association.

Report on problems of agricultural development in California. 22p. [San Francisco. 1924]. 31.3 C124 Folio.

Prepared by the Department of Research and Information.

This report "is an endeavor to crystallize and position the most important problems of agricultural development in California, and to point out certain relationships between problems and between interests and organizations concerned with their solution." p. [1].

Tables of California crops include the following relative to grapes: acreage, 1909, 1919-1923, p.19, and acreage distribution, 1924, p.9; and value of production, 1909, 1919, 1923 and 1926, estimated; relative to wine and table grapes and raisins: Farm value, 1919-1923; actual prices, 1913 or pre-war average and 1919-1923, p.20; yearly average prices, 1913-1923, p.11; and index numbers of price relationships, including peak reached during inflation period, lowest level during subsequent depression, and 1923, p.21; with a chart illustrating the 1923 price relationships, p.12; and relative to raisins and wine grapes; comparable index numbers, pre-war or 1913 to May, 1924, p.11, illustrated by a chart, p.14.

61. California Development Association, Research Department.

Economic survey of California counties, 1928. 17p., tables. Mimeo-graphed. San Francisco. 1928. 252.09 C1232

The text describes the "sources, character, usefulness, and limitations of the statistical series presented," and includes tables which show the following figures for grapes: Car-lot shipments, State totals, 1927; acreage, production in tons, farm value and value per acre, by classes, State total, 1927; 5-year average value per acre, by classes, State total; and bearing and non-bearing acreage, by classes, county totals, 1928.

A tabular summary of economic data for each county shows acreage and car-lot shipments of grapes for 1927.

62. California Fruit News [weekly] v.50, no.1369-v.84,no.2256, Oct. 3, 1914-Oct. 3, 1931. San Francisco. 1914-1931. 80 C12.

Continuation of California Fruit Grower.

"An old established trade journal devoted to fresh, dried and canned fruits, which is a primary source of statistical data on production, stocks, movement and prices to the trade, as well as a central source of general data on foreign trade and market conditions." -Survey of Economic Research and Sources of Data Regarding California, published by the California Development Association, p. 29.

The short articles or news items are practically all unsigned.

Tables include such statistics as follows: weekly prices of raisins by varieties, f.o.b. California, packers' quotations; annual prices; annual production and value of California crops including raisins and grapes, by classes; United States, Los Angeles and San Francisco exports and imports, and United States imports, monthly and annual; raisin production and stocks by varieties, annual; disposition of California raisins and grapes by classes, annual; California production of grapes by classes and districts, annual; weekly grape shipments from California, etc.

The annual statistical numbers summarize the weekly reports and include other tabulations of California fruit and associated statistics for latest year with comparative figures for previous years. They contain tables of interest as follows: fresh deciduous fruit shipments out of California, including grapes (1914 annual gives figures for 1909-1914; and 1930 for 1926-1930); California dried fruit output in tons, including raisins (1914 annual gives figures for 1909-1914; 1930 for 1926-1930); exports and imports of raisins and imports of currants in pounds, fiscal years (1914 annual gives figures for 1900/01-1913/14; 1930 for 1917/18-1929/30); California canned fruit and vegetable packs in cases, including grapes (1914 annual gives figures for 1911-13; 1930 for 1923-1930); earlier figures compiled from individual packers' reports and later figures by the Canners League of California. Other tabulations are also included, as for example, 1914 includes a table of receipts of foreign raisins at New York City, number of boxes of Sultanas and Valencias, by months 1913/14; 1930 contains a table which gives per capita United States consumption of dried fruit 1923, 1925, 1927, in pounds, including raisins, and a description, by variety and shipping season of deciduous fruits, including grapes.

The annual reviews are to be found in the following numbers and volumes:

1914, 50(1381) Dec. 26, 1914; 1915, 52(1433), Dec. 25, 1915; 1916, 54 (1486), Dec. 30, 1916; 1917, 56(1538), Dec. 29, 1917; 1918, 58(1590), Dec. 28, 1918; 1919, 60(1642), Dec. 27, 1919; 1920, 62(1992), Dec. 11, 1920; 1921, 64(1747), Dec. 31, 1921; 1922, 67(1804), Feb. 3, 1923; 1923, 69(1861), Mar. 8, 1924; 1924, 71(1925), May 30, 1925; 1925, 73(1977), May 29, 1926; 1926, 75(2033), June 25, 1927; 1927, 77(2086), June 30, 1928; 1928, 79 (2136), June 15, 1929; 1929, 81(2190), June 28, 1930; 1930, 83(2242), June 27, 1931.

63. California Grape Control Board, Ltd.

Alphabetical list of signatories to "Grape control contract" furnished by California grape control board, ltd., for use by its constituent class B members, their agencies and all other persons or corporations concerned therewith. 139p. [n.p.] 1930. 225 C123G

This booklet contains a classified list of all persons who have signed the Grape Control contract entered into June 20, 1930, arranged by counties, together with a copy of the contract, and of the San Joaquin Grower-Shipper Association contract attached to the Grape Control contract.

64. California Grape Grower [monthly] v.1-10, no.6; Dec. 1919-June 1929, illus. San Francisco, 1919-1929. 95.8 C12
Succeeded by the California Grower.
V.1-v.4, no.11: Official publication of the California Grape Protective Association. V.4, no.12, Dec. 1923-v.10, no.6, June, 1929: official publication of the California Grape Growers' Exchange. H. F. Stoll, editor and publisher. This set is indexed.
This publication is interested primarily in juice grapes. It contains numerous short items as well as longer signed articles, which include statistics of acreage, production, movements, sales, prices, etc., obtained chiefly from official sources. Information about the California Grape Protective Association, the California Grape Growers' Exchange, the California Wine Association, and the California Vineyardists Association is included as well as a good deal of material on the prohibition question, personal sketches of grape men, news items and articles on foreign grapes, items relative to tariff and freight rate changes, and legislation, and articles on transportation, grape markets, grape districts in California, grapes in other States, grape juice and other by-products, standardization, the raisin industry, prices, etc.

65. California's most important juice grape varieties. [3d ed.] 23p. San Francisco, California Grape Grower [1925] 95 C123
This illustrated "pamphlet descriptive of commercial varieties of juice or wine grapes is issued for educational purposes," especially for "handlers and purchasers of grapes in different parts of the United States," p.2.

66. California's most important table grape varieties. 31p. illus. San Francisco, California Grape Grower [1925] 95 C123C
"The object of this pamphlet is to give an account of the different varieties so that consumers outside the borders of our State may know their characteristics, merits and appearance and be able to call for those that seem to have desirable qualities. For the sake of convenience, the many varieties have been grouped according to color... and each group has been handled by viticultural experts who know their subjects thoroughly," p.2.

67. California Grape Growers' Exchange.
Report of the president... to the membership in annual meeting in San Francisco, Jan. 1921-Jan. 1925, Jan. 1927. San Francisco. [1921-1927] 95.9 C124
Each report covers the preceding year and contains a financial statement of the Exchange. There is no report covering the year 1925 as there was no annual meeting held in January, 1926. The January 1921 report gives a brief history of the organization from date of initial meeting November 6, 1919, and contains a table giving number of members and standing, and value and amount of tonnage handled. The January 1927 report tabulates old and new members and tonnage, by counties. Other membership, tonnage and price figures are given in the texts.

68. The California Grower [monthly] v.1,no.1-v.3, July 1929-1931.
San Francisco. 1929-1931. 95.8 C122

Official publication of the Associated California Fruit Industries, Inc., and the California Vineyardists Association. It takes the place of the C.V.A.- Fruit News and the California Grape Grower. H. F. Stoll, editor. V.1-2 are indexed.

"Its scope will cover those general and technical subjects which are of common interest to all phases of public life interested in the development of the production and distribution of grapes and deciduous tree fruits. Special consideration will be given to the new order of things made possible by the enactment of Federal Farm Relief... This magazine will not only deal with the grape service requirements of the industry but will also become the official publication of the Federal Grape Stabilization Corporation, organized to take advantage of farm relief for the 1929 and future seasons." v.1,no.1.

The annual reports of the managing director of the California Vineyardists Association to the Board of Directors for 1929 and 1930 are contained in the following numbers: v.1,no.6, December, 1929, p.4-10, 12; and v.3,no.4, April, 1931, p.3-6, 8,10.

Numerous statistics of unloads, prices, shipments, interstate movements, acreage, production, auction sales, imports and exports, etc. are contained in the articles, mostly from official sources.

69. California Packing Corporation.

Calpak annual. 2d-14th, 1918-1930. San Francisco, 1918-1930.
286.83 C12

2d-9th have title: California Annual.

5th-7th, 1921-23 not in the United States Department of Agriculture library.

14th, 1930, with similar tables in the earlier issues, contains the following of interest: opening prices, f.o.b. packing house, fancy natural Thompsons and fancy seeded, and exported tons, calendar year and crop year, 1915 to 1929, for raisins (2d, 1918 gives similar figures for 1901 to 1917); duration of California canning season, including grapes; schedule of average shipping weights dried fruits, raisins and figs, including bulk, seeded, seedless, and layer and cluster raisins, and raisins in tins and in packages; and comparative packs of California canned fruits and vegetables, including grapes, 1915-1929 (2d, 1918 gives similar figures for 1903-1917). For the series of tables on comparative packs the figures for 1903-1917 were compiled from records furnished by the California Fruit News, and the later ones from figures supplied by the Canners' League of California.

2d-4th, 1918-1920 include also tables giving comparative average opening prices on California canned grapes, 1903-1917, 1904-1918, and 1905-1919 respectively.

70. C. V. A. Bulletin-Fruit Service News. [monthly] v.1-2, no.4; July 15, 1928-May 20, 1929. [San Francisco. 1928-1929] 95.8 C121.

Official publication of the California Vineyardists Association and Associated California Fruit Industries, Inc. Succeeded by the California Grower.

Each number contains from 4 to 11 pages. Some statistics of shipments, track holdings, and auction prices are included, and information about the California Vineyardists Association and the Associated California Fruit Industries, Inc. is given. For example: the January 1929 number is the annual report of the managing director of the California Vineyardists Association for 1928; March, 1929 is a summary of accomplishments of the C.V.A. during 1927-1928; and May, 1929 tells about the new industry program and gives questions and answers on the stabilization plan.

71. California Vineyardists Association.

The grape industry. California's greatest agricultural problem; a statement of its economic position; its importance to the state; the plans for the future, embracing a new conception of agricultural relief; the assistance required therefor. 15p. San Francisco. 1929. 280.3 C123

This document presents the plan for a revised program developed by the California Vineyardists Association and the facts of the situation as developed by a thorough research of the economic position of grape production and distribution completed by the Association and parallel studies by the Research Department of the Metropolitan Life Insurance Company, the University of California and the California State Department of Agriculture. The personnel of the Board of Directors and the Policy Board of the Association are listed, p.15.

Tables give statistics as follows: The buying power from the grape and deciduous tree fruit production of the State allocated to various industrial lines; investment in vineyards and in wineries, bearing acreage 1928, and production 1927 and 1928 (estimated) of raisin, juice, and table varieties; table and black and white juice grape arrivals, unloads, and on track, October 4 and 18, 1928 at Boston, New York, Jersey City, Philadelphia, Pittsburgh, and at 29 eastern markets, and comparison of crops and prices of table grapes, peaches and plums 1922 and 1926.

72.

Report of progress 1928-1930. [3]p. [n.p., 1930] Assoc. File.

A summary of the activities of the Association. A table gives shipments as outlined by a shipping program, and actual shipments for the 1929 season of black juice and muscat varieties.

73.

Report of progress and finances. Statement of the conditions obtaining in the grape and tree-fruit industries, and an outline of the organization, plans and policies of the California Vineyardists Association, California Deciduous Fruit Association. Submitted... Mar. 15, 1928. [8]p. [San Francisco. 1928] Assoc. File.

74. Carkuff, A. M.

An agricultural survey of the Charleston area. S. C. Agr. Expt. Sta. Bul. 253, 62p. illus. Clemson College, 1928.

Grapes are included in Tables 6 and 7 (p. 24-27) which give Charleston's inbound shipments of fresh fruits and vegetables, monthly, 1927, by water (including volume in pounds and average freight charge) and by rail (including State of origin and volume in carlots).

75. Carrick, D. B.

Some cold-storage and freezing studies on the fruit of the vinifera grape. N. Y. Cornell Agr. Expt. Sta. Mem. 131, 37p. Ithaca. 1930.

References cited, p. 37.

"This report is based on a study begun in 1919 in the Office of Preservation of Fruits and Vegetables in Transit and Storage, United States Department of Agriculture. During 1921 and 1922 the work was carried on jointly in New York City by the United States Department of Agriculture and the Cornell University Agricultural Experiment Station. Later experiments on the grape were continued at Ithaca, New York, as a part of an investigation relating to the handling and the storage life of deciduous fruits." p. 3.

The report attempts to answer three questions, and "to indicate their important relationship to the handling, transportation, and storage problems of the grape," as follows: "Would not the vital activities of the grape and its storage parasites be reduced to a minimum if the fruit were held continuously at its lowest non-freezing temperature? What are the lowest non-freezing temperatures of the cell sap in the vinifera grape? How resistant is the grape to different degrees of freezing, and what are the characteristic symptoms of such injury?"

Tables and diagrams show freezing points of Emperor, Flame Tokay, and Malaga grapes, storage behavior of Emperor and other varieties of grapes, and other information relative to the experiments.

76. Central Fruit Growers Exchange, Inc.

1928 grape summary. 1 sheet. [1929] Pam. Coll.

This is a table showing the number of 4 and 12-quart baskets, and cars of grapes sold by the Central Fruit Growers Exchange through their 12 local associations in Arkansas and Missouri, and the expenses.

77. Chace, E. M., and Church, C. G.

Tests of methods for the commercial standardization of raisins.

U. S. Dept. Agr. Tech. Bul. 1, 25p. 1927.

Literature cited, p. 23.

An investigation which was carried out at the request and with the collaboration of the raisin interests of California is reported in this bulletin. Although grading raisins by visual inspection is considered, the bulletin deals mainly with physical and chemical methods of grading raisins, the weight per volume test, moisture estimation by compression, and mold test, which were placed in practical operation during the 1925 crop season by the raisin interests, and the test for sunburn.

Table 1 gives average composition of raisins (1923 crop) Thompson Seedless and Sultana varieties.

Tables 2-7 give results of tests, by districts, as follows: average weight per berry and weight per volume of extra standard, standard, and substandard, and inferior Thompson Seedless, and of standard and substandard Sultana raisins (1924 crop); moisture tests on Thompson Seedless raisins (compression cylinder); and hydrogen peroxide mold tests, June 19, 1925.

On p. 19 is a graph for determining moisture in raisins by compression.

78. Chandler, W. H.

Fruit growing. 777p. Boston, New York, etc., Houghton Mifflin Co. c1925. 93 C362

Bibliography, p. [713]-768.

Response of grapes to fertilizing and other practices in soil management (p.319-323), pruning and training grapevines, and the effect of different systems of training on yields (p.461-476), climatic responses of different varieties of grapes (p.612-616), factors, as acid and sugar contents, that influence the quality of different varieties of grapes (p.643-644), handling grapes, with reference to the California and other grape storage experiments (p.698-700), and other phases of grape growing are discussed in this book.

79. Chase, L. T.

Grape grades. Mich. Hort. Soc. Rpt. 53(1922):93-98. 1923. 81 M58.

Mr. Chase tells of the initial work in grape grading in Michigan, the grades adopted, mistakes made, etc. He recommends a brand for Michigan Grapes. Mr. Partridge adds to the statement made by Mr. Chase relative to the trade preference for New York grapes because of the superior pack. Mr. Partridge quotes a letter from the United States Bureau of Markets and extracts from letters from commission men on the subject showing that the New York grapes bring higher prices than Michigan grapes.

80. Christie, A. W.

Efficiency in dehydration. Calif. Dept. Agr. Mo. Bul. 10:75-82 Sacramento. 1921.

A paper read before the second Dehydration Convention, November, 1920.

Figures are given for overhead expenses as shown by record of a \$25,000 dehydrator operated for a period of 40 days on grapes.

81.

Some observations on the dehydration of apricots, peaches and grapes. Calif. Dept. Agr. Mo. Bul. 10:94-96. Sacramento. 1921.

Address before the second Dehydration Convention, November, 1920.

A table gives figures for cost of dehydrating grapes at the University Farm evaporator, 1920.

82. Christie, A. W., and Barnard, L. C.

The principles and practice of sun-drying fruit. Calif. Agr. Expt. Sta. Bul. 388, 60p. Berkeley. 1925.

Directions for drying grapes and other fruits are presented to "serve as a general guide for all growers who desire to dry their fruits in the most efficient manner." Ripe ness of fruit and methods of picking, preparation for drying and storage after drying, equipment, and practices, including picking, washing, dipping, sulfuring, drying and operating costs, are discussed.

The extent of the dried fruit industry and principal localities and varieties for sun-drying are considered at the beginning of the bulletin with tables showing the following: tonnage and estimated value (total and per pound) of sun-dried fruits (including raisins) for 1923; acreages of certain fruits (including raisin grapes) in 1924; and United States imports and exports of sun-dried fruits (including raisins and currants) fiscal year 1922-23.

Grapes are also included in data given in the following tables: specifications, capacities and costs of standard field trays; number of trays required for sun-drying (p.31); and average amounts of sulfur and times for sulfuring fruits (p.46).

These tables relate to raisins: relation of sugar content of grapes to the drying ratio, yield and grades of muscat raisins (p.11. and approximate average time required to dry raisins (p.53).

83. Colby, A. S.

Forward steps in Illinois grape growing. Ill. State Hort. Soc. Rpt. 62(1928):223-231 1929. 81 I16

"The purpose of this address," says Mr. Colby is to answer "as far as possible" these questions: "What are the future prospects for the Illinois grape grower? Have we already sufficient bearing vines to care for local demand? Is the competition from areas of native grape production in the Missouri Ozarks, Michigan and the eastern States, coupled with that from California with its vinifera varieties, becoming so increasingly great that the Illinois grower should go so far as to dig up his own vineyard, much less think seriously of planting more vines?" He discusses the present situation in acreage and production giving various statistics, the need for study of potential markets, and the cultural steps to be taken in the production of quality grapes. Under the discussion of the need for the study of the market he enumerates workable principles of roadside marketing which will bring profitable returns and tells why "Illinois grapes are not to be found to any extent on the Chicago market." He quotes an extract from the Illinois Extension Messenger which gives figures for profits in the vineyard of George Marzolf of Nauvoo after Station recommendations regarding planting distances had been carried out. He concludes: "With the natural advantages of site and soil for grape growing, especially in the southern third of the state along the Mississippi River in the Western portion, grape growing in Illinois is capable of further expansion, provided that 'quality' varieties are grown and 'quality' care is given from blossoming to marketing."

84. Colby, C. C.

The California raisin industry - a study in geographic interpretation. Ann. Amer. Geogr., 14(2):49-108, June, 1924. Pam.Coll.

"The author discusses in a general way the early history of grape growing in California, pointing out the many obstacles, such as unfavorable irrigation laws, improper marketing practices, insect and fungus pests, etc., which have been overcome. Success in marketing came, with the organization in 1913 of a cooperative association, which, through the introduction of improved drying and packing practices and the stimulation of consumption through nation-wide advertising has been the vital factor in keeping the raisin industry in a prosperous condition despite economic readjustments in the postwar period and a greatly increased production." Expt. Sta. Rec. 52:642.

Tables 1-4 give the following statistical information relative to raisins: production in California in tons from 1894 to 1923, inclusive and for selected years previous to 1894; tonnage produced in and imported into the United States, 1885, 1890, 1895, 1898, and 1902; exports from the United States to all countries, and to leading countries in 1913 and from 1918 to 1922, inclusive, and to the major divisions of Canada in 1922. The export figures are from Foreign Commerce and Navigation of the United States, and the production and import figures are from the United States Dept. of Agriculture Yearbook, 1902, and various other sources.

A map (p.66) shows irrigation ditches and marketing centers (packing plants and receiving stations maintained by the Sun-Maid Growers Association) in the Central or Fresno Raisin District, and a map (p.51) shows distribution of raisin grape vineyards in San Joaquin Valley, 1922.

An analysis by Raoul Blanchard of the methodology used in this study is found on p. 242-247 of Methods in Social Science, a Case Book, compiled under the direction of the Committee on Scientific Method in the Social Sciences of the Social Science Research Council. Edited by Stuart A. Rice. Chicago, Ill. ,The University of Chicago Press. 1931.

85. Coleman, J. W.

Grapes in West Virginia. Penn. Stockman and Farmer 51:1039. 1928.

Tells how a vineyard of 500 vines was cultivated to bring 9,500 pounds of good quality grapes, which sold for \$850 with cost of production amounting to less than \$200.

86. Conn, D. D.

California vineyards. Calif. Bankers Assoc. Bul. 8:513, 518-519, 534,540. 1927. Pam.Coll.

Mr. Conn, managing director of the California Vineyardists Association, includes in this article the general plan to be followed in the conduct of the affairs of the Association as set forth June 26, 1927, and discusses what is being done to meet the different provisions of the program.

87. Convention of Fruit Growers and Farmers.

Proceedings. 53d-63d, 1920-1930. Sacramento. 1920-1931. (Calif. Dept. Agr. Mo. Bul. v.9-10, 12-20; Dec., 1920, Oct., 1921, May, 1923, Jan.-June 1924, Jan.-June 1925, Jan.-June 1926, Mar., 1927, Feb., 1928, Feb., 1929, Feb., 1930, and Jan., 1931). 81 C125

Held under the auspices of the State Department of Agriculture, California.

Many of the addresses contain references to grapes and raisins. Those dealing more specifically with grapes are as follows:

V.55 [Experiments in Shipping Grapes by Boat] by E. M. Sheehan, p. 163-165. The President of the California Grape Growers' Exchange advocates efficient practical waterway service as relief to the railroads for the transportation of California's perishable crop.

V.57. Is the Juice Grape Industry Permanent? by E. M. Sheehan, p. 119-124. The speaker discusses the effect of prohibition on the grape industry, the California Grape Growers Exchange as it has affected the successful marketing of wine grapes in the past five years, etc.

California Table Grapes, by G. W. Ashley, p. 116-118. A grape grower and shipper advises shipping fewer and better grapes.

Deciduous fruit and grape industry of California, by F. W. Read, p. 104-109. The season of 1924 with regard to shipments, production costs, prices, legislation, success of clearing houses, auction prices, etc.

V.60. The Grape Clearing House of 1927, by D. D. Conn, p. 157-161. The clearing house division of the California Vineyardists Association organized in 1927 and its accomplishments.

What Can be Done to Help the Grape and Tree Fruit Grower? by F. W. Read, p. 164-166. Mr. Read advocates producing better quality grapes in this speech on what cooperation can do and what the Government can do to aid in the problems of the grape grower.

Phases of the Grape Situation, by E. M. Sheehan, p. 162-164. A discussion of the grape situation from the point of view of present forms of marketing, shipments, varieties shipped, and the traffic problem.

V.61. Raisins from the Sun-Maid Angle, by Harry M. Creech, p. 153-160. Also in California Cultivator 71:525. 1928. The general manager, Sun-Maid Raisin Growers Association reviews the raisin situation from the emotional, the economic and business sides.

Necessary State and Federal Legislation Required to Support the Clearing House Theory for the Distribution of Perishable Commodities, by D. D. Conn, p. 160-163.

Plans for the California Vineyardists Association and the Associated California Fruit Industries, by the managing director of the former. Mr. Conn says: "It is a great detriment to the grape industry, both within and without, to preach the gospel of over-production and liquidation, until every means has been exercised to develop every market into which the grape can go."

V. 63. One Year of the Federal Farm Board, by C. C. Teague, p. 87-93. Includes the "Grape Industry Plan."

Work of the California Grape Control Board, Ltd., by Frederick J. Koster, p. 94-99. The President of the Grape Control Board tells about the board and its relation to the Farm Board. He enumerates eight obstacles in the way of fresh grape control.

Light Ahead in the Raisin Industry, by Roy M. Hagen, p. 99-101. The general manager of the Sun-Maid Raisin Growers Association says that "Light ahead in the raisin industry consists in the very sound, wise, business-like policy which the Control Board and the Farm Board have adopted in studying this situation which confronts the grape business."

Standardization of Grapes, by Alonzo E. Taylor, p. 113-116. Standardization of juice grapes as a growers' problem.

88. Cooper, J. R.

Commercial grape growing. Ark. Agr. Expt. Sta. Bul. 174, 38p. Fayetteville. 1922.

Contains sections on harvesting and marketing (p.35-39).

89.

Grape growing in the Ozarks. Amer. Fruit Grower. 45(7):5,11, July, 1925. 80 G85

A table gives average yield per plant in pounds of 10 varieties of the best Ozark grapes over a period of six years.

90. Corbett, L. C., Caldwell, J. S., Stuart, William, and others.

Horticultural manufactures. U. S. Dept. Agr. Yearbook 1925:601-622.

Includes a paragraph on the manufacture of Muscadine grape jelly and grape paste, p. 616; a table (p. 604-605) giving figures of the distribution and extent of the drying industry by 10-year intervals; and a table (p.606) giving value of principal dried products by 5-year intervals, including raisins, 1899 to 1919 with figures for 1921.

91. Corbett, L. C., Gould, H. P., Robinson, T. R., and others.

Fruit and vegetable production. U. S. Dept. Agr. Yearbook 1925: 151-452.

Also issued as Yearbook Separate 931.

A discussion of grapes (p.272-284) includes American grape history, changes in the industry, etc. A series of maps illustrate grape production of the United States, 1849 to 1919, by ten-year periods, with statistics (pounds) by States. A chart shows production, exports, and imports of raisins, 1872-1925.

92. Corbett, R. B.

Receipts of food by rail and water in Providence, Rhode Island.

R. I. Agr. Expt. Sta. Bul. 211, 15p. Kingston. 1927.

Table 7, p.12 shows receipts of each of the food products (including grapes) by rail and by water in car lots or car-lot equivalents annually, 1921 to 1925 inclusive.

93. Corbett, R. B.

Rhode Island agriculture, a statistical description. R. I. Agr. Expt. Sta. Bul. 206, 123 p. Kingston. 1926.

The purposes of this bulletin are "to present an 'inventory' of the agriculture of Rhode Island in more detail than is possible when the county is the basic unit" and "to furnish a 'source-book' of information concerning Rhode Island agriculture." - p.6.

Table XLVI, p. 110, gives statistics showing the number of grape vines in each county in the State, 1900, 1910, 1920, and 1925, and index numbers.

Table XLVIII, p. 112, gives statistics showing the number of grape vines in each town, 1925.

94.

Sources of carload receipts of food in Providence, Rhode Island, 1921-1925. R. I. Agr. Expt. Sta. Bul. 215, 106p. Kingston. 1928.

"The purpose of this study has been to give Rhode Island growers information as to the state of origin, the time of arrival and the relative quantities of various products received in Providence in carloads, also, to give consumers a better knowledge of the sources of their foods and a better understanding of the transportation and distribution problems involved in obtaining foods."

Data relating to grapes are given in the text (p. 7, 9, 18-19, and 61) and in a map, tables and diagrams as follows: freight charges from important shipping States to Providence (p. 19), carload receipts in Providence by State of origin (p. 68), and by months during the non-competing season and by weeks during the local season 1921 to 1925 (p. 69), carload shipments to Providence from each State 1921 to 1925 (p. 18), and average monthly carload receipts of grapes in Providence 1921 to 1925 (p. 19). Grapes are included in the following tables and diagrams: number of carloads of fruits and vegetables received 1921 to 1925 (p. 9), New England as a source of carload shipments of foods for Providence, 1921 to 1925 (p. 58), average annual receipts in Providence in terms of carloads of important fruits and vegetables (p. 7), and trends in the carload receipts of various products 1921 to 1925 (p. 8).

95. Crawford, R. P.

Surplus grapes; California's vigorous plan to control them. Country Gent. 101 (1):8-9, illus. Jan., 1931. 6 C833

The financial details of the Farm Board's plan to help the California grape growers through the cooperative grape-production control board, composed of the various interests, are set forth in this article on California's grape surplus problem.

96. Cricher, A. L.

Transportation of Pacific Coast perishables. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 12, 91p. 1924. 157.54 T67

This report, made at the request in 1923 of the Agricultural Legislative Committee of California, "portrays the facts in the present problem of transportation of fruits and vegetables of the

Far Western States and correlates the various causes of car shortage, retarded market distribution and car movement."-p. IX

Transportation of grapes is discussed on p. 40-41. A map shows the primary destinations of 44,448 car lots of grapes shipped August 3 to November 10, 1923, from California, and principal carriers of transportation. The origin and distribution of grapes are discussed on p. 15-18, illustrated by a chart showing car-lot shipments from Pacific Coast States as compared with the other principal States of origin, and a map tracing unloads in designated cities from States of origin.

Tables give information as follows: Comparative shipments of 8 perishable commodities, including grapes, 1918 and 1923, in car lots (p.6), with the same by months for grapes (p.68), and car-lot unloads of perishable fruits and vegetables by 27 consumption centers, 1923, including grapes (p.8-9), with the same for grapes by States of origin (p.75) -- figures from the United States Bureau of Agricultural Economics; total shipments of apples, grapes, and other deciduous fruits handled by the Southern Pacific, Western Pacific, and Santa Fe Roads and connecting carriers (not including the Los Angeles-Salt Lake Railroad) 1922, by State and city of destination, compiled by the California Development Association (p.82); intercoastal trade including tons of grapes, currants and raisins eastbound, 1923, figures from United States Shipping Board(p.89); and quantity and value of United States exports of dried fruit, including raisins and of raisins by country importing, 1919 and 1923, and of raisins by customs districts, 1923.

97. Crider, F. J.

Establishing a commercial vineyard in Arizona. Ariz. Agr. Expt. Sta. Bul. 96, 46 p., illus. Tucson. 1923.

This bulletin deals mainly with the cultural aspects but describes the grape areas of Arizona (p.1-2), and suggests commercial varieties for the different areas (p. 3-5). A section entitled Intercropping, in one paragraph, quotes a large grape grower at Peoria to the effect that he had reduced operating costs \$50 per acre in 1921 and \$75 per acre in 1922 by growing 2 rows of cotton between rows of his grapes (p.46).

98. Crocheron, B. H., and Norton, W. J.

Fruit markets in Eastern Asia. Calif. Agr. Expt. Sta. Bul. 493, 366p. Berkeley. 1930.

Paper No.10. The Giannini Foundation of Agricultural Economics. In cooperation with the United States Department of Commerce.

"This report seeks to answer the question whether demands exist or might be created among Oriental peoples by which, through methods now used or others which might be brought into existence, our markets in the Far East could be increased to a point whereby the economic situation among fruit growers would be materially improved." p. 27.

The cooperation of numerous agencies, governmental and private, was obtained by the investigators who spent eight months in travel, conducting investigations by means of group conferences and private interviews in thirty-seven cities and by questionnaires sent out over a wider range of territory in an attempt "to learn: (1) What the normal food habits of the people are, and what fruits and fruit products a given territory would normally consume. (2) What forms these products would take; whether the market desires them in dried form or canned form, and if so, what size package would adapt itself to local consumption. (3) How much of these and at what prices a tributary territory might consume under proper conditions. (4) What trade promotion, if any, is necessary to develop these markets, assuming that agencies package their products in the size and kind desired."

The report is written up by countries as follows: Japan, Korea, China, the Philippine Islands, French Indo-China, Siam, British Malaya, the Netherland East Indies, and India and Ceylon, (p.313-334).

The bulletin includes the following statistical material:

Table 19 (p.71), China's imports of currants and raisins (pounds and dollars) by countries of origin, 1925-1927; Table 37 (p.122), Importation of raisins and currants (pounds and value) into Shanghai; Table 38, re-exports of raisins from Shanghai to other China ports, 1926 and 1927; Table 75 (p.316) Car-lot shipments from California and the United States and prices of grapes, 1921-1929, with a diagram showing average relation between California f.o.b., price of grapes and United States car-lot shipments of grapes; Table 86 (p.344), United States exports (pounds) of raisins, etc. to Asia, 1910-1928; Table 97 (p.354), Net import of currants and raisins (pounds and dollars) into China ports, 1927 and 1928.

Tables giving fruit statistics including grapes and raisins as follows: exports (pounds and dollars) of canned, dried and fresh, 1927-1929, from California to Japan (including Korea), China, Kwantung, Hongkong, the Philippine Islands, French Indo-China, Siam, British Malaya, Java and Madura, other Netherland East Indies, British India and Ceylone, and in pounds to Asia, average, 1924-1928; production, Japan, 1927 (tons), 1905-1927 (pounds); average production 1924-1928 in United States and California; percentage change of California prices (1921-1922 and 1926-1927) and acreage (1920 and 1925); percentage of United States production exported to all countries, Europe and Asia, and to all countries and Asia of fresh, canned and dried, average 1924-1928; United States production and exports (pounds), average 1924-1928; imports into Korea, 1925-1927, and (pounds and dollars) into the Philippine Islands (fresh) 1926 and 1927, into Java and Madura (fresh), 1926-1928, by country of origin, and imports and exports into French Indo-China, 1926-1928.

Lists of native fruits giving seasons include grape information as follows: Southern China (retail prices per pound) and British India (average prices at retail in Calcutta and Bombay).

The following tables of current prices of fruits include grapes or raisins: Canned, (American) Shanghai and Foochow, October, 1929, Southern China (Hongkong, Canton, Swatow, Amoy), Manila, French Indo-China (Saigon, Pnom-Penh) and Bangkok, Siam, Nov., 1929, British Malaya, November-December 1929, Rangoon, Burma and British India, January, 1930, and Colombo, Ceylon, February, 1930; canned, (American and Chinese) Tientsin and Peking, September, 1929; fresh, (Chinese) Shanghai, September, 1929; fresh, (American) Southern China, October, 1929; and dried, (American) Shanghai and Chefoo, October, 1929, Southern China, November, 1929, and British India (Calcutta, Bombay, Madras), January, 1930.

Charts give United States exports of certain fruits, fresh, canned and dried (p.21) and fresh (p.27) to Asia, average 1924-1928.

Freight rates from California ports, handling charges, tariff rates, etc., are given in the text.

99. Cross, F. B., and Locke, L. F.

Grapes in Oklahoma. Okla. Agr. Expt. Sta. Circ. 62, 31p. Stillwater. 1926.

The object of this circular is to call attention to the varieties of grapes which may be produced on a commercial scale. It contains two paragraphs on harvesting and packing (p.18-19) and is accompanied by a mimeographed sheet entitled, Summary of Grape Shipping Test, which gives data regarding shipping quality of the grapes recommended.

100. _____ and Locke, L. F.

Grapes in Oklahoma. Okla. Agr. Col. Ext. Circ. 254, 35p. Stillwater. 1929.

Harvesting and packing, p.18; short description of varieties, p. 26-31; table giving average yields in pounds per vine of different varieties at the Woodward and Stillwater Experiment Stations, p.22-23.

101. Cruess, W. V.

Commercial fruit and vegetable products; a textbook for student, investigator and manufacturer. 530p. New York, McGraw-Hill Book Co. Inc. 1924. 389.3 C88C

The chapter, Canning of Fruits, contains a section on grapes, p. 122.

The chapter, Unfermented Fruit Beverages, contains a section on grape juice, including varieties of grapes for juice, harvesting, storage of grapes and of juice, crushing and stemming, canning and carbonating the juice, etc., p.220-226.

The chapter, Fruit and Vegetable Syrups, contains a section on grape syrup, including preparation, preservation, yield, etc., p. 249-251.

A paragraph on preparation of sweet fruit pickles mentions grapes, p. 456.

A chapter, entitled The Packing of Dried Fruits and Vegetables, contains a section on raisins, including stemming, grading, seeding, fumigation, etc., p.425-428.

The chapter, The Sun Drying of Fruits and of Vegetables contains the following on p. 345-351: Sun drying of muscat grapes, including cooperative association in California, relation of maturity to yield and quality, harvesting, turning, staking, placing in sweat box, cost of producing, etc., drying of seedless grapes in California, undipped Sultanina, soda-dipped, oil-dipped and bleached Sultanina raisins, drying grapes in Australia, and sun-drying of wine grapes and cull table grapes. Tables give the following: plantings of raisin grapes in California and production of raisins 1916 to 1922 (after Sun-Maid Raisin Growers' Statistical Dept.); effect of maturity on yields and returns from muscat grapes, one acre, 1913 and 1914 (after Bioletti); and cost of muscat raisin production for year 1920 on basis of one acre and yield of three-fourths ton per acre (after D. H. Gray).

102. Cruess, W. V.

Progress in grape products. A new way to profit from the excess in production. Calif. Countryman 16(1):4-5. Sept., 1929. 6 Un34

An article on the by-products situation of the grape industry which tells of the organization of Fruit Industries, Inc. through the merger of some of the leading grape-products manufacturers of California, its members and officers, other independent manufacturers, and new products which will serve as outlets for grapes. Several experiments in process for the distribution of new products are described as follows: the delivery of grape juice to its milk patrons by Roberts Dairy Products of Lincoln, Nebr.; a frozen grape punch syrup placed on the market experimentally by M. A. Joslyn in co-operation with the Harris Ice Cream Company in Berkeley; and the sale of fresh grape juice at stands in San Francisco.

103.

The use of raisins and other grape products in candy and ice cream. Fruit Prod. Jour. and Amer. Vinegar Indus. 10(1):5-8. Sept., 1930. 389.8 F94

The author quotes Department of Commerce figures for total annual per capita consumption of commercially prepared confectionery in the United States, 1925 to 1928. "Practically none of this candy contains raisins or other fruit. Since raisins can be added to most candies without increasing the cost of raw materials and since most candies are improved thereby it would seem that the candy industry could utilize much greater amounts of raisins in candy than has been the case in the past."

Mr. Cruess gives the results of experiments with raisins, juices, and concentrates in making candy, ice cream and ices. He says, "It is believed that a raisin candy bar of pleasing appearance and flavor as well as of good keeping quality made throughout the United States according to a standardized formula and marketed under nationally advertised trade marks such as 'Sun-Maid' would have every chance of success." With regard to ice cream and ices he says, "There is probably not an opportunity for using large tonnages of raisins in ice cream. However, water ices, made with grapes could probably be made fairly popular by advertising."

104. Cruess, W. V., and Christie, A. W.

The dehydration of fruits (a progress report). Calif. Agr. Expt. Sta. Bul. 330, p. 49-77. Berkeley. 1921.

This publication gives results of investigations and observations on the dehydration of the more important varieties of fruits (including grapes) in California made by the Fruits Products Laboratory, and extending over a period of three years. This has been done with the idea that dehydrated fruits of high quality will find new markets, and also to test the validity of the claims of superiority made for dehydration.

Table VI, p. 71, includes data showing approximate operating cost of dehydrating grapes per green ton and per dry ton.

105. _____ and Christie, A. W.

Some factors of dehydrater efficiency. Calif. Agr. Expt. Sta. Bul. 337, p. 277-314. Berkeley. 1921.

This bulletin deals with observations made in California, of many different types of dehydraters, having different systems of heat production, and is issued as an aid to operators, and prospective purchasers or builders of dehydraters. Plant investment, cost of operation, fuel efficiency, functions of the air, etc. are considered.

Table I shows cost of dehydration as affected by plant investment; Table II shows comparative costs of dehydration, including cost per green ton (labor, fuel, power and light, total operating charges, fixed charges from Table I, and total cost of production) of grapes, on the University Farm, and with the Ceramic oven type of dehydrater. Table III gives comparative fuel efficiencies of several types of dehydraters, including grapes in three types. Table IV gives examples of air flow measurements (velocity, total volume, and volume per 100 sq. ft. of air) and drying times (hours), including grapes in 6 different types of dehydraters.

106. _____ and Christie, A. W. and Flossfeder, F. C. H.

The evaporation of grapes. Calif. Agr. Expt. Sta. Bul. 322, p 421-471. Berkeley. 1920.

Investigations recorded in this publication were made in order to obtain information on the construction and operation of evaporators for the drying of grapes. Figures are given showing the cost of construction (p. 429-430) and of operation (p. 441-442) of the University Farm evaporator, and results of investigations of different processes involved in the drying of grapes in the sun and in evaporators are given in a summarized form. These include a discussion of the relative merits of the two methods (including a table giving yields of moisture-free product per 100 pounds fresh grapes of different varieties under the two methods), dipping (which includes a table showing cost of labor of dipping and spreading grapes, (p. 447), sulfuring, effect of temperature on quality and rate of drying, stemming, seeding and packing, (which includes a table showing percentage of loss during stemming and seeding of four varieties of evaporated grapes), etc.

107. Cruess, W. V., Overholser, E. L., and Bjarnason, S. A.
Storage of perishable fruits at freezing temperatures, preliminary report. Calif. Agr. Exp. Sta. Bul. 324, p. 25-43. Berkeley. 1920.
The data contained in this bulletin are the result of a year's experimental study of methods of treating quickly perishable "fruits before storage, at 10° F. to prevent or minimize undesirable changes in color and flavor," and "the utilization of such fruit in canning, preserving, confections, etc., after six to ten months storage."
A review of previous work along the line of keeping fruits under refrigeration is given (p.25-28), and a table (p.37) and observations (p.40) summarize the results of experiments with grape juice at 8° F. to 12° F.

108. Cullinan, F. P.
Grape culture. Purdue Agr. Ext. Bul. 102, rev. ed., 12p. Lafayette, Ind. 1926.
One paragraph on harvesting, p. 11. Brief description of eight of the more important commercial varieties, p. 11-12.

109. Darrow, W. H.
The fruit industry of Connecticut. Conn. Agr. Col. Ext. Bul. 43, 14p. Storrs. 1921.
The following tables give statistical data for grapevines, taken from the United States Bureau of the Census: Table 2, p.2, non-bearing and bearing grapevines in Connecticut, 1910 and 1920; and Table 8, p.8, bearing and non-bearing vines by counties, 1910 and 1920.

110.
Grape culture in Connecticut. Conn. Agr. Col. Ext. Bul. 69, 16p. Storrs. 1924.
Harvesting and marketing, p. 12-13; varieties, p.13-16.

111. Davis, Kary, ed.
Horticulture enterprises. 466p. Philadelphia, London, etc., J. B. Lippincott Co. c1929. 90 H785
This book is designed as a text-book "and practically all the horticultural enterprises are analyzed into jobs," or teaching units. The grape enterprise is Chapter V, with Stanley Johnston as collaborator. Jobs 10 and 11, p. 201-205, are as follows:
Harvesting, grading and packing, and Marketing and using.

112. Davis, R. W.
Containers for shipping grapes: Packing and Shipping, May, 1926, p.32. 286.8 P12
Not examined.

113. Dawson, O. L.
South Dakota farm production and prices, 1890-1926; with annual summary for 1925-1926. S. Dak. Agr. Expt. Sta. Bul. 225, 111p. Brookings. 1927.
United States Department of Agriculture, Bureau of Agricultural Economics, cooperating with Department of Farm Economics, Agricultural Experiment Station, and the South Dakota State College of

Agriculture and Mechanic Arts.

Total production (tons) and total farm value, and value per unit, December 1, for grapes, 1924-1926 are given in Table 2, p.9.

Estimated gross value of farm production (including grapes) 1924 and 1925 - United States, is given in Table 86, p. 103.

114. Dean, W. H.

Grapes at any price. Frenzied prosperity troubles the eastern growers. Country Gent. 86(3):10-11, 54. Jan. 15, 1921. 6 C833

Mr. Dean quotes "D.K. Falvey, of Westfield, New York, one of the foremost growers in the belt, since its founding eleven years ago, president of the Chautauqua and Lake Erie Fruit Growers' Association," D. L. Thornton, president of the Southern Michigan Fruit Association, Manager Cook of the Keystone Grape Company, and Manager Joseph A. McGinnies of the Chautauqua and Erie Grape Company, relative to the high prices of grapes, the demand for juice grapes, and the injustice of the 10 per cent tax on grape juice and its effect on the growers of New York, Michigan, and Ohio unless this tax legislation is modified. Numerous figures are given in the text for yields, prices, etc., and detailed figures are given showing average net profits for a period of five years for three vineyards of a certain New York grower.

115. Dearing, Charles.

Muscadine grapes and grape products. Fla. State Hort. Soc. Proc. 33(1920):146-153. 81 F66

Mr. Dearing sets forth the aims and accomplishments of the United States Department of Agriculture in its Muscadine grape project in the southeastern United States, including survey, production, breeding, and utilization investigations, in this address, in which he suggests to the Florida horticulturists the "consideration of Muscadine grape growing as a sectional industry in a program of diversified farming or horticulture and as one means of making useful part of" the vast area of idle land. Figures for price per ton and yield per acre of grapes in the Southeast, New York and California are given for comparison.

116.

Unfermented grape juice: how to make it in the home. U. S. Dept. Agr. Farmers' Bul. 1075, rev., 25p. 1931.

"This bulletin is intended to serve as a guide in the preparation and preservation of unfermented juices by means of application of heat (pasteurization)," p.II. Introductory remarks direct attention to the popularity of fruit beverages, and to the types of food value and uses of grape juice.

117. DeKalb, Courtenay.

Olives and grapes offer great possibilities for the South as shown by their culture in Spain. Manfr. Rec. 92(4):63-64. July 28, 1927. 297.8 M31.

The author of this article names a few "elementary points insisted upon by the Spanish viticulturist" which "may suggest possibilities to American horticulturists" for improving American grapes. "The

entire South," he says "is suitable for the production of both olives and grapes," and in these if "intelligently cultivated, lie possibilities for hundreds of millions of dollars of revenue to the South."

118. DeVault, S. H., and Bouis, G. E.

Roadside markets in Maryland. Md. Agr. Expt. Sta. Bul. 280, p. 165-201. College Park. 1926.

"The information contained in this report is based upon a study which was made during the summer and fall of 1925 relative to the marketing of farm produce at the roadside."

Tables 12 to 14 list average prices of fruits and vegetables at permanent and temporary roadside stands in Anne Arundel County (including grapes) and at two temporary stands in Frederick County (including Concord grapes) for 1925.

119. Dickey, J. A.

Production costs and how to lower them. Ark. State Hort. Soc. Proc. 47(1926):45-51. 1927. 81 Ar4P

Three tables show cost of producing grapes on 43 farms in northwestern Arkansas, include farm labor and power, materials, etc. per acre and per 4-quart basket, distribution of costs on basis of acres per farm, and selling costs per 4-quart basket on basis St. Louis.

120. Diederich, A. L.

The relationship of production and movement of fruits and vegetables in the United States to the distribution of New Jersey's produce. N.J. Dept. Agr. Circ. 88, 82p. Trenton. 1925.

Reference bibliography, p. 81-82.

Grapes are considered in detail on pages 31-33 as follows: The general situation, development, etc. of the industry and the commercial aspects of the crop are discussed in the text; a chart represents shipping seasons for important States; Table VII gives statistics for car-lot shipments from certain States, 1923, and the United States 1921, 1922 and 1923; Table VIII gives the production of grapes in thousands of pounds, in the United States, California, New York, Michigan and New Jersey, for 1890, 1909, 1919 and average for 1923 and 1924.

Grape statistics for 1923 are included in Table I (p.14) which gives estimated receipts of certain crops by truck or wagon from New Jersey in Philadelphia, comp. from reports of E. R. Biddle, of the United States Department of Agriculture.

There is a mimeographed, statistical supplement to this circular, which contains a table on grapes (p.12) giving production statistics for 1922-1924, and car-lot shipments, 1921-1924.

121. Dummeier, E. F.

Co-operation in marketing Washington farm products. Wash. Agr. Expt. Sta. Bul. 194, 108p. Pullman. 1925.

This bulletin aims to answer, as far as possible, questions concerning the forms of organization, the benefits, and the causes of success and failure of cooperative marketing associations in Washington.

The operations of two grape associations are described on p. 90-91.

122. Dunn, W. E.

Peru; a commercial and industrial handbook. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 25, 530p. 1925. 157.54 T67

The grape-growing regions of Peru, varieties, and ripening dates are given, and reference is made to "recent" shipments of grapes from the Ica Valley to the United States for the winter market, p.138, 378-380, 372, 381,386.

123. Durst, C. E.

Problems in marketing fruits and vegetables. Kans. State Hort. Soc. Bien. Rpt. 38(1924-1925):114-120. 81 Kl3

In connection with a discussion of supply and demand of fruit, a table is included which shows the average total production and the average per capita production of the more important fruits, including grapes, (1923 crop) total production in tons and per capita production in pounds. Raisins (pounds) are included in another table giving exports of certain fruits in 1923 and 1924.

124. Eastridge, J. A.

Grapes, production and cooperative marketing. Kans. State Hort. Soc. Bien. Rpt. 36(1920-1921):67-71. 81 Kl3

A general discussion of the subject.

125. Edwards, Brice, and Park, J. W.

The marketing and distribution of fruits and vegetables by motor truck. U. S. Dept. Agr. Tech. Bul. 272, 88p. 1931.

"The purpose of this bulletin is to present a general picture of motor-truck transportation of fruits and vegetables in the United States. The study deals chiefly with long-distance motor-truck transportation. Movements of approximately 20 miles or less, most of which were formerly by wagon, including transportation of market-garden supplies and draying to local shipping points or canning factories, are excluded from the statistics except where noted... Information in this bulletin is based mainly upon interviews with 2,203 farmers, shippers, and truckmen in producing sections, 250 wholesale dealers in cities, records and observations of representatives of the Federal market-news service, and records of the Delaware State Highway Department. Summaries of preliminary mimeographed reports are included." p.2.

Tables of fruits and vegetables include grape statistics as follows: railroad and estimated motor-truck shipments from certain New Jersey and principal western New York counties, and commercial producing counties in Connecticut and western Massachusetts, 1928; railroad and reported motor-truck shipments from Delaware, 1928; and railroad, boat, and estimated motor-truck shipments from important producing counties in the Hudson Valley, N. Y., 1928 and from Berrien and Van Buren Counties, Mich., 1929; comparison of motor-truck receipts with rail and boat unloads at Boston and Cincinnati, at Denver and New York City, and at Los Angeles and Salt

Lake City, 1929; comparison of motor-truck and rail unloads at Buffalo, Rochester, and Syracuse, 1928; and destination of estimated motor-truck shipments in western New York, 1928.

126. Ellsworth, R. H.

Cooperative marketing and purchasing 1920-1930. U. S. Dept. Agr. Circ. 121, 55p. 1930.

"The material now presented includes data based on a count of the active farmers' business associations in 1930, with estimates as to the membership in 1928 for each of the States in the various commodity groups and estimates on the same basis for the business transactions for the 1927-28 marketing season." p. 1-2.

Table 21 (p.29) gives pounds of grapes handled by five associations, 1920-1929, and by a sixth, 1922-1929.

127. Erdman, H. E.

American produce markets. 449p. Boston, New York, etc., D. C. Heath and Co. c1928. 280.3 Er2

Grape auctions, p. 124-126.

128. Erickson, A. S.

Study of wastage in fruits and vegetables. 75p. Boston. 1923.

Typewritten. 280.3 Er4

Bibliography, p. 71-72.

Binder's title, Terminal Marketing of Agricultural Products. Wastage. October, 1923. Massachusetts Department of Agriculture, New England Research Council on Marketing and Food Supply, United States Department of Agriculture cooperating.

Illustrated by mounted photographs, including one showing decayed grapes, due to delay in transit and poor loading, p.25.

Amount of decayed, blemished and condemned grapes as reported by the Federal Inspector, August 1922 - August 1923, is shown in a table, p. 74, and in a chart, p. 61.

129. Faurot, F. W.

Grapes. Missouri State Fruit Expt. Sta. Circ. 20, 28p. Mountain Grove. 1921. 81 M694

Factors influencing commercial production (climate, market relations, and soils) p. 3-5; Commercial varieties, p. 21-23.

130. Feldman, Herman.

Prohibition; its economic and industrial aspects. 415p. New York, D. Appleton and Co. 1927. 390.1 F33

Discussion of increase in consumption of grapes since prohibition, p. 278-281.

Chapter entitled, Was liquor consumption declining before prohibition? contains tables showing per capita consumption of wines in the United States, 1875-1899, and 1900-1920 (from Statistical Abstract of the United States, 1922), per capita consumption of wines in Great Britain and in France, 1900-1913, capital invested in the wine industry in the United States, 1899, 1904, 1909, and 1914 (from United States Census of Manufactures), and Government taxes on wine September, 1916 to October, 1917, October, 1917 to February, 1919, and after February, 1919.

131. Fieldhouse, Virgil.
Grape growing in Wisconsin. Wis. State Hort. Soc. Ann. Rpt. 55(1924-1925):38-44. 81 W75T
A grower in southern Wisconsin tells how they have won out "by a narrow margin" in growing grapes as a market crop.

132. Filley, H. C.
Cooperation in agriculture. 469p. New York, J. Wiley & Sons, Inc. 1929. (Wiley agricultural series) 280.2 F48
Suggested readings at ends of chapters.
Chapter XIV is devoted to the cooperative marketing of raisins and prunes. It discusses factors influencing methods of marketing, the California Associated Raisin Company, the necessity out of which it grew, its success, its monopoly as a result of stimulation of prices and increased demand for raisins due to the post-war inflation and prohibition, the investigation by the Federal Government, the change of name to Sun-Maid Growers' Association, new Sun-Maid companies, and the present business policy and outlook.
The author includes three tables dealing with the cooperative marketing of California raisins as follows: expenditures for advertising, 1914-1924; tonnage handled, value, and price per pound, f.o.b., 1912-1923; and operating expenses of Sun Maid Raisin Growers of California, 1922-1924.

133. Fite, A. B., and Curry, A. S.
Grape culture. N. Mex. Agr. Expt. Sta. Bul. 192, 29p. State College. 1931.
Varieties are described on p.22-23, and a table (p.23) gives figures for yields per acre for the years 1923 to 1929, inclusive, for the Muscat and Mission varieties.

134. Flohr, L. B.
Marketing farm produce by parcel post. U. S. Dept. Agr. Farmers' Bul. 1551, rev., 54p. 1930.
Following a general discussion of the possibilities of marketing farm produce by parcel post - including parcel post requirements and containers, methods of standardizing the products, packing, and business phases involved - the various farm products are discussed separately. Two paragraphs on grapes are found on p.20-21.

135. Fox, J. J.
Manual of rural appraisement as applied in California. 154p. San Francisco, Pacific Rural Press. 1923. 282 F832
"This is designated as a handbook for the banker, realtor and investor. The productivity and endurance of land, the extent of its adaptability to various crops, and its convenience to good markets and cheap transportation are deemed the fundamental bases of land valuation. Methods and exceptional problems of the appraisal of agricultural land in California are discussed." Expt. Sta. Rec. 49:90.
Chapter V, p.108-113 is devoted to vineyards. A table, p.147, gives figures for raisin production and prices, 1905-1921, and a table, p.154, gives State acreage of fruit, nuts, and vines as of 1921.

136. Fraser, Samuel.

American fruits; their propagation, cultivation, harvesting and distribution. 888p. illus. New York, Orange Judd Publishing Co. Inc.; London, Kegan Paul, Trench, Trubner & Co. Ltd. 1924. 93 F86.

Shipping troubles, harvesting, storage, packing, placing the fruit in the basket, loading, bulkheads, car floor, trays, and boxes, and bearing capacity of a vine (including cost of production in New York) p.487-492.

The grape in California- wine grapes, raisin grapes, drying raisin grapes, bleaching, muscat type of raisin, Sultana, currants, dry grapes, shipping California grapes, harvesting and packing, and currants or the Corinth grape (giving dates of ripening and figures for yields) etc., p. 495-502.

Variety descriptions: American grapes, p. 832-837; Vinifera grapes, p. 837-838.

137. Fresno Morning Republican.

Raisin day annual [1924] 48 p., illus. Fresno, Calif. [1924] 95 F89 Folio

Contains all kinds of information about the San Joaquin Valley, California, including short articles with titles as follows: Valley is Raisin Center of World; Valley Table Grape Industry Important; Juice Grape Pays Grower; and Exeter Grapes are Famous. Various figures are given mostly for 1923 such as earning power of crops, including grapes by classes, acreage of vineyards by counties, production and prices of raisins, etc.

138. Funk, W. C., Waller, A. G., and others.

Agricultural production and marketing in Atlantic County, New Jersey. N. J. Agr. Expt. Sta. Bul. 416, 39p. New Brunswick. 1925.

New Jersey Agricultural Experiment Station and New Jersey Agricultural Extension Service cooperating with the United States Department of Agriculture, Bureau of Agricultural Economics.

"This is a study of Atlantic County agriculture from the basis of future development. The Atlantic City market is described as to its population, industries, transportation facilities, markets, live poultry market, stores, food consumption, etc. The agriculture of the county is then discussed, with special regard to the present status and prospects of peaches, sweet potatoes, berries, truck crops, apples, grapes, poultry, etc." U. S. Dept. Agr., Bur. Agr. Econ., Agr. Econ. Bibliog. no. 19.

Table 3 shows total 1924 receipts of important farm products (including grapes) in Atlantic City and quarterly receipts by rail and by truck. Table 4 shows data relative to grapes, along with other crops as follows: estimated acreage (bearing and non-bearing), production and disposition (quantity consumed in county and percentage shipped out of county) in Atlantic County, 1924.

139. G., F. E.

Storage of grapes. Rural New Yorker 88:1495. 1929. 6 R88

F. E. G. answers questions about the method of storing a large quantity of grapes for a month or two, the type of building, temperature, containers, etc.

140. Gast, R. H.

The growing and marketing of grapes; one of California's important agricultural activities in which nearly every county is represented. West. Dietitian 1(6):26-27, 36-37. Oct., 1926. 389.8 W52

A popular article on the grape industry of California which tells of the "gigantic proportion to which the industry has grown," mentions several forward steps in the industry, including the new shipping program inaugurated "this season" through the Car Service Division of the American Railway Association, and traces the processes the table grape goes through from the vine to the consumer, who purchases it by the pound from the city fruit stand.

141. Gaston, H. P.

Roadside marketing in Michigan. Mich. Agr. Expt. Sta. Spec. Bul. 185, 49p. East Lansing. 1929.

Table 2 (p.8) lists the products sold at 11 representative markets, giving percentage of total season's business, amount of average sale (cents), and percentage of total number of sales, for each product, including grapes.

142. Giusta, H. S., comp.

United States trade with Latin America in 1928. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 88, 82p. 1929. 157. 54 T67

Tables include quantity and value 1926-1928, of exports of grapes to Panama (p.27) and Cuba (p.36); exports of raisins to Argentina (p.66); and imports of grapes into the United States from Argentina (p.65), and from Chile (p.73)

For similar statistics including 1925 figures, see United States trade with Latin America in 1927, compiled by H. S. Giusta. Washington, 1928. (Trade Prom. Ser. 71)

United States Trade with Latin America 1923-1925 are United States Bureau of Foreign and Domestic Commerce, Trade information bulletins 224, 345, and 420, published 1924-1926. 1923 is by J. R. McKey and 1924-1925 are by J. R. McKey and H. S. Giusta.

1924 and 1925 include grapes in tables giving quantity and value of imports into the United States from Argentina and Chile in 1923, 1924, and 1925.

1924 includes grapes in tables giving quantity and value of United States exports to Cuba, 1923 and 1924.

1923 includes raisins in table giving quantity and value of United States exports to Mexico 1913-14, 1922 and 1923.

143. Gladwin, F. E.

Central packing houses for grapes. Rural New Yorker 83:362, 427, 458. 1924. 6R88

The demands from the unfermented-juice factories and the deterioration in packing and grading are two reasons responsible for the elimination of the small package. "It is now proposed to market at least one-half the tonnage from Western New York in the small size basket each season in order that the bulk market may be relieved." The author relates the success of an experiment in packing, in 1923, through the operation of three central packing houses at widely separated points by one of the oldest and biggest grape growers' cooperative associations.

144. Gladwin, F. E.

Cost of growing grapes. *Country Gent.* 94(7):55. July, 1929. 6 C833
Brief statement by Mr. Gladwin in charge of grape experiment work, Fredonia, New York, on the average cost per acre of growing grapes and cost of harvesting per ton. Costs reported by Dr. Partridge of Michigan State College are also given.

145.

The future of eastern grape-growing. *Rural New Yorker* 82:334-335. 383-384. 1923 6 R88

After reviewing the grape business for past seasons the writer concludes that "money from grape-growing in the future is to come" from improved Concord quality, that "the Eastern grower, to compete with the West, must standardize his fruit," and that "more and more of the Concord crop must go into the 2 and 4-qt. baskets."

146.

Grape-growing at the crossroads. *Rural New Yorker*. 88:337, 382, 426. 1929. 6 R88.

The author shows how the eastern grape industry "is tied up with that from the Far West," and stresses the fact that there is an overproduction of grapes in the United States. A permanent and profitable stabilization of eastern grape-growing "must come through a big reduction in the present acreage," and "through higher production through the utilization of only the best soils in the proven sections, through strict adherence to packing standards, and through a greater utilization of Concord grapes other than as fresh fruit."

147.

Grape varieties old and new. *Rural New Yorker* 85:410, 418, 468, 515-516. 1926. 6 R88.

A discussion of Concord and other varieties of grapes and their likelihood of succeeding in untried localities, including a consideration of marketing from a varietal standpoint.

148.

A history of grape growing in eastern United States. *Rural New Yorker* 90:485-486, 513-514, 543-545, 565, 592-593, 613-615. 1931. 6 R88.

This article in six parts traces "the beginning of commercial grape-growing from but a few vines to an industry" with special reference to varieties derived from the *vinifera* and the *Labrusca* "the two species that have been and are the bases of American viticulture."

149.

Marketing the eastern grape crop. *Rural New Yorker* 87:356, 410, 452. 1928 6 R88.

Relates how the four co-operatives of western New York and Pennsylvania shipping grapes are functioning, and what they are doing to assure their growers an adequate supply of packages, to secure cars, maintain equitable freight rates, and handle

damage claims. Other services equally as valuable such as price stabilization, ^{and} essentials for success of cooperatives, as application of business methods, principles and ethics, establishment of good credit, loyalty of membership, and location where a volume of business is available, are discussed.

150. Gladwin, F. E.

Outlook for the grape grower of the East. *Rural New Yorker* 90:133-184, 216, 254, 284, 340. 1931. 6 R88

The author concludes in this article, written at the end of the 1930 harvest season, that "two solutions to the situation are open, either increase the demand for grapes, and this seems rather the more remote, or reduce the supply through reduction of the acreage now contributing to the surplus." He includes suggestions which a committee of grape growers in the East "believe to be best for the future of grape-growing" as deduced from information obtained in the grape survey made by the United States Department of Agriculture and State agencies of New York and Pennsylvania.

151.

Studies on the cost of producing grapes. *N. Y. State Agr. Expt. Sta. Bul.* 479, 33p. Geneva. 1920.

A popular edition of this bulletin, by J. D. Luckett, was issued with the title, *The Cost of Producing Grapes in the Chautauqua and Lake Erie Fruit Belt*.

"Detailed information has been accumulated regarding the cost of producing grapes in three widely separated vineyards of the Chautauqua and Lake Erie Fruit belt for the period 1915 to 1919, inclusive."

Production costs, showing cost of maintenance, labor, upkeep, harvesting, total cost of production, and net returns are given for each vineyard. Tables show in detail total cost of production, cost of production per acre and per ton for each vineyard, annually 1915-1919, inclusive, with 5-year average.

152.

Trend of eastern grape growing. *Rural New Yorker* 86:374, 430, 473, 1927. 6 R88

"The poor financial return from the grape crop of 1926" due to the lateness of the season, poor quality, maximum crop, abundance of other fruits, etc. "ought to serve as a deterrent in the planting of Concord on a commercial scale for years to come" says Mr. Gladwin in this article in three parts. He also discusses briefly the "feeling among eastern grape growers that more attention must be given" to packing and grading.

153. Goudiss, C. H.

Give the grape its rightful food place; put this valuable fruit where it belongs in the homes of the nation. 17p. New York, Privately printed by The People's Home Journal [F. M. Lupton, Publisher. c1921] 389.1 G72.

The author, Food Advisor of The People's Home Journal, says in this article that "we have in the grape a food situation without precedent-vast production already assured and the former outlet closed," that the "cumulative drinking habits of thousands of years" have restricted the grape to one particular role in the estimation of a large number of Americans" as well as Europeans, and that the only logical course to pursue is "to make use of this delicious fruit in every way we can." The author tells of "the great health and strength advantages which the grape provides" because of the dextrose, tartaric acid, sodium, potash, magnesium, and iron, which it contains, and explains the so-called grape cure. Recipes are given on p.15-17.

154. Graham, E. S.

Fruit rate situation. Ark. State Hort. Soc. Proc. 47(1926);11-18. 1927. 81 Ar4P

Figures are given for rates on grapes in Arkansas compared with rates in other sections of the country, as well as a discussion of the grape rate situation.

155. The Grape Belt and Chautauqua Farmer [Semi-weekly]

V.27, no.5- v.38, no.19. Sept. 17, 1920-Oct. 27, 1931. Dunkirk, N.Y. 1920-31. 110 G76

A newspaper which features grape news and quotes market prices for grapes. Statistics of grapes in the Chautauqua-Erie belt are given first-page space in a December or January issue each year.

The page of statistics is indicated by the December 30, 1930 issue which contains a statement of the business of the Chautauqua and Erie Grape Growers Association for 1930, including number of cars and net weight of grapes shipped out of this belt by rail, delivered to juice plants by truck, trucked out of belt, used and sold locally; estimated price per ton; value of crop; tonnage shipped annually 1900-1930; number of 10-ton cars shipped to juice plants and percentage and value used by juice plants, 1916-1930; 1929 shipping for numerous points in Pennsylvania and New York; number of 12-quarts, table grapes and juice grapes shipped by Chautauqua and Erie grape growers from Ripley, Westfield, Portland, Pomfret, Hanover and Perryburg.

The annual statistics are in the following issues: 1920 in Dec. 24, 1920; 1921 in Dec. 16, 1921; 1922 in Jan. 12, 1923; 1923 in Dec. 18, 1923; 1924 (not found - probably in issue for either Dec. 2 or 19, 1924 which are missing from the files of the U. S. Dept. of Agr. Library). 1925 in Dec. 29, 1925; 1926 in Jan. 21, 1927; 1927 in Jan. 10, 1928; 1929 in Dec. 27, 1929; 1930 in Dec. 30, 1930.

156. Green, E. L., and Kertesz, Z. I.

Studies on the chemistry of grape juice. N. Y. State Agr. Expt. Sta. Tech. Bul. 181, 14p. Geneva. 1931.

Literature cited, p. 13-14.

Changes in composition of commercial grape juice during storage, p. 10-12.

157. Gries, C. G.

Foreign trade of the United States, annual, 1790-1929. Fruits.

U. S. Dept. Agr., Bur. Agr. Econ., Div. Statis. and Hist. Research. Rpt. F. S. 48, 106p 1930. Mimeographed. 1.9 Ec752

Grapes, fresh, p.2-3; raisins and currants, p.3-4.

A chart (figure 5) shows volume of United States exports of raisins, and imports of currants and raisins, 1900-1929.

Tables of foreign trade of the United States give statistics for the year ended September 30, 1790-1842, and for the year ended June 30, 1843-1929 (figures incomplete) as follows: quantity and value of domestic exports, 1922-1929, and of imports, re-exports and net imports, 1907-1929, and value of imports and net imports, 1862-63 and 1865, of fresh grapes (p.43-44); quantity, 1804-1833 and quantity and value, 1834-1929 of imports, reexports and net exports of currants (p.29-33); quantity, 1804-1929 and value, 1834-1929 of imports, reexports, and net imports and quantity, 1790-1795 and value, 1790-1791, of reexports of raisins (p.65-70); and quantity and value of shipments of fruit, including raisins from the United States to Alaska (p.87-88), to Hawaii (p.92-93), and to Porto Rico (p.96), 1903-1929.

158. Hadley, G. T.

Pushing back the grape horizon. Overland 88(n.s.)197-198., illus.

July, 1930. L.C.

Not examined.

159. Hartzell, F. Z.

Dust versus sprays for the control of grape insects and diseases.

Mich. State Hort. Soc. Rpt. 57(1927): 11-22. 81 M58

A table gives comparative cost of dusting and spraying an acre of vineyard (p.14), and costs of labor and materials are discussed (p.20-21).

160. Hauck, C. W.

Farm produce received in trucks on the Columbus wholesale market, 1930. Ohio State Univ., Dept. Rural Econ. Mimeogr. Bul. 25, 22 p. Columbus. 1931. 281.9 Oh32

"For the third successive year the Division of Markets of the Ohio Department of Agriculture has reported daily the receipts of farm produce arriving in motor trucks on the Producers Wholesale Curb Market in Columbus. These receipts have been analyzed by the Department of Rural Economics of the Ohio Agricultural Experiment Station. The arrivals in the last six months of 1928 and in the year 1929 are recorded in Bulletins No. 16 and No.25 of this series." p.1.

Grapes are included in tables giving receipts in pounds by rail and in trucks, and estimated value of receipts in trucks. The 1928 and 1929. reports include also monthly receipts.

161. Hawkins, Paul.

Experiments in growing California grapes in Florida. Fla. State Hort. Soc. Proc. 38:177-189. 1925. 81 F66

The writer answers the following questions: "I. Can bunch grapes be grown successfully, either commercially or for home use? II. What varieties are best? III. What is the quality of the fruit? IV. When do they ripen? V. What is the market for Florida-grown grapes?"

162. Hawley, Edith.

Average quantity, cost and nutritive value of food consumed by farm families; food consumed during one year by 1331 farm families of selected localities in Kansas, Kentucky, Missouri, and Ohio. A preliminary report. 29p. U. S. Dept. Agr., Bur. Home Econ. 1926. Mimeographed. 1.9 H752Aq

Grapes and raisins are included in Tables 5-9 giving average quantity and value of the various foodstuffs consumed by farm families of selected localities as follows: 406 families of Kansas during 1923; 365 families of Kentucky during the year ended July 1, 1923; 178 families of Missouri during 1923; 382 families of Ohio during the year ended October 1, 1923; and 1331 families of Kansas, Kentucky, Missouri and Ohio, 1922-23.

163.

The quantity, money value, and nutritive value of food consumed by 86 farm families in Franklin County, Vermont, in 1923-24. A preliminary report. 25p. U. S. Dept. Agr., Bur. Home Econ. 1927. Mimeographed. 1.9 H752Q

Issued in cooperation with the University of Vermont, Extension Service.

Table p. 23, gives average quantity and value of various foodstuffs consumed during one year by 86 farm families in Franklin County, Vt., for the year ended June 1, 1924, including average per adult-male unit, average per family, and percentage purchased of grapes consumed by 10 families, and raisins by 81 families.

164. Hedrick, U. P.

Manual of American grape-growing. New and rev.ed., 458p. New York, The Macmillan Co. 1924. 95 H35M

This book is a revision of an earlier edition published in 1919, in which "Chapter XIV, Grape Products, has been rewritten, and Chapter XVII, Varieties of Grapes [p.330-448], has been revised by cutting out descriptions of eight varieties which grape-growers are discarding, and by putting in descriptions of eight of the new varieties now being offered by nurserymen." p.viii.

The chapter entitled Grape Products quotes an account of raisin-making from United States Department of Agriculture Bulletin No. 349, by Husmann. Other chapters included are as follows: Grape Regions and their Determinants; Marketing the Crops and Vineyard Returns, which discusses harvesting in the East and North, handling the grape in California, marketing and harvesting and handling Muscadine grapes, and quotes from United States Department of Agriculture

Bulletin 273, p.33-36, by G. C. Husmann and Charles Dearing; Fertilizers for grapes, which gives an account of the experiment of the New York Agricultural Experiment Station and the results for the first five years (from Bulletin No. 381, New York Agricultural Experiment Station) including tables giving figures for yields of grapes in fertilizer experiments; and Grape Breeding, which contains a brief historical account of grape breeders.

165. Helferich, H. W.

Finding new market outlets for California raisins; a study of its problems and its advertising demands. Printers' Ink 119 (3): 133-134, 136. 1922. 280.3 M38R

The Assistant Sales and Advertising Manager of the Sun-Maid Growers tells how the association has conducted an intensive advertising and sales campaign through which it has maintained prices and increased the sales of raisins, and how they must not only keep this up but develop a foreign market as well.

166. Hill, E. B., Riddell, F. T., and Elliott, F. F.

Types of farming in Michigan. Mich. Agr. Expt. Sta. Spec. Bul. 206, 83p. East Lansing. 1930.

Grapes are included in tables as follows: acreage, percentage of crop land occupied, production, and farm value of the important crops in Michigan for the 5-year period, 1924-1928, p.23; and typical farming systems in area 12B, the fruit section of southwestern Michigan, based on 237 records taken in a representative township of Berrien County, including grape vines on 20, 30, 40, 60, 80, and 120-acre farms (special tabulations 1925 census), p.71.

167. Hobson, Asher.

The agricultural survey of Europe. Italy... with the collaboration of O. R. Agresti and P. A. McDonnell. Edited by Louis G. Michael. U. S. Dept. Agr., Bur. Agr. Econ., Div. Stats. and Hist. Research. F.S.35, 93p. 1926. Mimeographed 1.9 Ec752

Grapes and wine, p.28-31. Among data included are: acreage and production of grapes in Italy, 1921, 1922, 1923, 1924, and average 1909-1913; production of wine in Italy for the same years; acreage of grapes in Italy, Spain and France, 1922, 1923, 1924 and average 1909-1913; and wine production in Spain, France, and Italy, 1921, 1922, 1923, 1924, and average 1909-1913.

168. Hodson, E. A.

Distribution of 1925 Ozark grape crop. Market Growers Jour. 38:78. 1926. 6 M34

Three tables show the following as reported by the United States Market News Service at Kansas City; number of cars shipped from each point in Arkansas 1922-1925, except for Siloam Springs and Decatur, Green Forest, Roland and Bradford in 1925; daily prices August 13, to September 1, 1925 for 4-quart climax baskets, f.o.b. and in 8 cities; and daily shipments from Arkansas, August 13, to September 1, 1925 compared with number of cars shipped from other producing areas. A map illustrates distribution of Ozark grapes.

169. Hodson, E. A.

Handling and loading grapes. Ark. Agr. Col. Ext. Circ. 171, 11p.
Fayetteville. 1924. 81 Ar4p
References, p.3.

This bulletin contains sections dealing with the following: commercial importance in Arkansas, leading producing sections, shipping season, preparation for market, grades, packages, and loading. There are two tables which show: car-lot shipments of grapes from the leading producing States for 1920 to 1923 inclusive, as reported in the Yearbook of the United States Department of Agriculture and reports of the United States Bureau of Agricultural Economics, and grape shipments by weeks for important States, 1922 season.

170. Hollingshead, R. S., and Wakefield, R. P.

Handbook of foreign tariffs and import regulations on agricultural products. I. Fresh fruits and vegetables. Prepared under the direction of Henry Chalmers. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 79, 109p. 1929. 157.54 T67

"In order to assist American producers and shippers of fresh fruits and vegetables to plan their foreign business in the light of the duties and regulations of foreign countries, as well as to help them avoid technical, customs, and sanitary difficulties in the admission of their products, this handbook has been prepared. It presents, for each important foreign market, the record of importations in recent years [1922-1927] the rates of import duty, a summary of pertinent food laws and plant quarantine regulations, as well as the marking, packing, and documentary requirements on shipments..."-p.v.

Foreign markets for fresh fruits (p.3-63) includes grapes.

Grapes are not included in lists of United States exports of fresh fruits to Belgium, Egypt or Finland.

Nos. II-IV of the series of Handbooks of foreign tariffs and import regulations on agricultural products, Canned Foods in Europe, Canned Foods in the Western Hemisphere, and Canned Foods in Asia, Africa, and Oceania, are Trade Promotion series no. 85, 97, and 114 published 1929-1931. These are designed to furnish "American producers and exporters with all the food laws, regulations, and tariffs applicable to canned foods in force at the dates of publication." These do not include grapes in the lists of United States exports of canned foods to the various countries, but grape juice, jelly from grapes, raisins, Sultanas, etc. are mentioned throughout the texts.

Directions for keeping the information up to date are given in the front of each handbook.

171. Horst, E. C.

The happy grape growers. Outlook 154:407-408, 433. 1930. L.C.

172. Howard, F. K.

History of the Sun-Maid Raisin Growers. 45p., illus. Fresno. 1922.
Assoc. File.

Following ten pages of history of the California Associated Raisin Company up to February, 1922 when the corporate name of the organization was changed to Sun-Maid Raisin Growers, this booklet contains the articles of incorporation and by-laws, and the names of the members of the Board of Directors, officers, and trustees of the company, various voting trust agreements, crop contracts, etc. Tables p.43-44 give statistics of the company as follows: prices and returns to the grower, prices per ton and per pound received by growers, and gross sales, 1912 through 1920, and advertising expenditures, 1914 through 1922. The consent decree of 1922 is also included, p.41-42.

173. Husmann, G. C.

Currant-grape growing: A promising new industry. U. S. Dept. Agr. Bul. 856, 16p., illus. 1920.

Includes the following sections (p.1-3): historical introduction; importance of the currant industry in Greece; and imports of currants into the United States, etc.

Table I shows quantity (pounds) and value of currants imported into the United States from 1906 to 1918, inclusive.

Harvesting and curing currants, p.15-16.

174. Idaho, Department of Agriculture.

Official grades for the standardization of Idaho farm products, 1927-28. 132p. [Boise] 1927. 30.5 Id10

The official United States and Idaho grades for the packing and sale of grapes [effective July 1, 1927, for the seasons 1927-1928] p. 18-19.

175. Illinois, Agricultural Experiment Station.

A year's progress in solving farm problems of Illinois. Annual report.. 1924/25-1930/31. Urbana. 1926-1931.

Each volume contains a paragraph or so on the studies of the Illinois Agricultural Experiment Station of the storage qualities of grapes, conducted by A. S. Colby, as follows: 1924/25, p.155; 1925/26, p.151; 1926/27, p.237; 1927/28, p.271; 1928/29, p.225; 1929/30, p.243-244; 1930/31, p.248. Results of studies of cold storage keeping qualities of grapes are indicated in a table in 1928/29, p.226-228, giving characteristics of grape varieties under test, 1921-1929.

Reference is made to the storage experiments with grapes at the Illinois Agricultural Experiment Station in a half-page article entitled, How Grape Storage May Extend the Marketing Period, Amer. Fruit Grower 44(9):28. Sept., 1924.

176. International Yearbook of Agricultural Statistics, 1930-31.

828p. Rome, Printing office of the International institute of agriculture. 1931. 251 In84

The United States is included in tables classified by continents and arranged by countries; containing the following information: apportionment of areas, agricultural production, etc., including either vines or grapes (under the subdivision: trees, shrubs, and bushes), p. 20-154; area in vines, production of wine and of grapes, and yield of wine and of grapes per hectare for the countries of the northern hemisphere, average 1909-13, and annually, 1927-1930, inclusive, and for the countries of the southern hemisphere, average 1909/10-1913/14, 1927/28, 1928/29, and 1930/31 (p. 190-193); international trade in grapes and raisins, average 1909-13, and annually 1927-1930, inclusive (p.338-345); imports and exports of wine for the same years (p.356-361).

Monthly prices of wine, 1913, 1927-1930, and part of 1931, in Spain, France, Italy, and Portugal are given on p.576.

For similar statistics see earlier yearbooks as follows: first four issues published under French title and covering decennial periods as follows: first volume (dated on title page 1910) contains comparative tables for 1901-1910; second volume (dated on title-page, 1911-12) contains tables for 1905-1914; third volume (dated on title-page, 1913-14) contains tables for 1905-1914; fourth volume (dated on title-page, 1915-16) contains tables for 1907-1916: fifth volume published with French and English title contains a cumulation of the data for 1909-1921; and beginning with the sixth volume, 1922, the publication became a regular annual, with title in English, the sixth volume containing figures for 1919 to 1922 and an average figure for 1909-1913.

Monthly Crop and Agricultural Statistics, also issued by the International Institute of Agriculture, contains data on crop conditions, acreage and production of vines, and trade and production of wine, etc. in foreign countries.

177. Irish, J. H.

Fruit juice concentrates. Calif. Agr. Expt. Sta. Bul. 392, 20p. Berkeley. 1925.

"The investigations reported in this publication supplement those of Bulletin 359, Fruit Beverage Investigations, of this Station [by W. V. Cruess and J. H. Irish]," and deal principally with experiments on the preparation of concentrated fruit juices. Experiments on the utilization and preservation of fruit concentrates are also reported, and there is a brief discussion of the market for surplus fruits in the form of concentrated juice for use in the beverage industry, and a paragraph on commercial production of fruit concentrates.

A table (p.4) shows possible yields (amounts and value) of concentrates and beverages from 260,000 tons of cull table grapes and raisins.

178. Irish, J. H.

Fruit juices and fruit juice beverages. Calif. Agr. Expt. Sta. Cir. 313, 64p. Berkeley. 1928.

"The purpose of this publication is to furnish practical directions for the preparation of fruit juices and fruit juice beverages. The contents are based on Circular 220 [Unfermented Fruit Juices, by W. V. Cruess] and Bulletin 359 [Fruit Beverage Investigations, by W. V. Cruess and J. H. Irish], California Agricultural Experiment Station, both publications being now out of print. This is supplemented by the results of later investigations made by the Fruit Products Laboratory of the University of California."

The first part of the circular is devoted to unfermented fruit juice including grape juice manufacture on p.19-31, and the second part to the preparation of beverages from fruit juices and concentrates, including grape juice beverages on p.58-59, and raisin beverage and raisin ale among beverages from dried fruit on p. 61-62.

The equipment used in fruit juice manufacture is described and a table shows approximate cost of equipment. The qualities desired in grape juice and varieties of grapes for juice are considered briefly, followed by a description of the manufacturing processes in the making of the juice, including gathering the grapes, crushing and stemming, pressing, etc., and preservation of the juice by pasteurization, cold storage, and preservatives.

A discussion of costs and returns on grape juice (p.31) includes a table which itemizes in detail the estimated cost per quart bottle of juice. Two tables on p.52 show the estimated cost of fruit syrups and beverages, including red and muscat-grape. These give figures for cost of a ton of fruit, of one gallon of syrup (including fruit, sugar, power and labor, pasteurizing, and container) and total cost; and beverage cost in cents, of one 8-ounce bottle (including syrup, labor, bottle, pasteurizing, label, and total), and total cost exclusive of bottle.

179.

Manufacture of beverages from surplus and off-grade fruits. Better Fruit 23 (3-4):5-6, 9-10. Sept., Oct., 1928. 80 B46

This article describes the manufacturing process in grape, apple, and loganberry juices. The qualities desired in grape juice, gathering the grapes, crushing and stemming, storage of juice, etc. are considered. The author says, "At present the most popular juices are those made from the Concord and other closely related (i.e. Labrusca) varieties."

180. Jacob, H. E.

The use of sulfur dioxide in shipping grapes. Calif. Agr. Expt. Sta. Bul. 471, 24 p. Berkeley. 1929.

181. Jacob, H. E., and Herman, J. R.

Harvesting and packing grapes in California. Calif. Agr. Expt. Sta. Bul. 390, 46p. Berkeley. 1925.

Contains, in addition to sections on harvesting and packing, which deal with picking and transporting to the packing house and equipment and arrangement of packing houses, a section on shipping. Tables show kinds, size, relative contents when packed of standard lug boxes recognized by the California State Department of Agriculture, Bureau of Standardization, 1924, and relative numbers of crates and lugs sold on the auction markets of the United States in 1923. Two diagrams give temperature of fruit in transit with and without salted ice.

182. James, D. M.

The fruit and vegetable supply for fifteen cities. Penn. Dept. Agr. Gen. Bul. 493, 82p. Harrisburg. 1930.

Grapes are included in tables as follows: car-lot receipts of various commodities from Pennsylvania and from all other sources, and at 15 Pennsylvania cities, 1923-1929; and car lots unloaded in Philadelphia, Pittsburgh, Scranton, Reading, Erie, Harrisburg, Wilkes-Barre, Allentown, Johnstown, Altoona, Lancaster, Bethlehem, Williamsport and Easton, monthly, 1929, and by State of origin.

Pennsylvania Department of Agriculture, General Bulletin No.461 published in 1928 gives similar statistics for 1927.

183. _____ and McFeely, H. F.

The market for Pennsylvania fruit. Penn. Dept. Agr. Bul. 446, 35p. Harrisburg. 1927.

In the section on grapes (p.31-35) the text and charts show the following: annual and monthly receipts in 15 markets 1923 to 1926, inclusive, from Pennsylvania, other Eastern States and California; source of car-lot receipts by States, and comparison of shipments and receipts of Pennsylvania grapes, 15 markets, 1923-1926; also, average annual receipts of grapes by cities 1923-1926 from Pennsylvania, other Eastern States and California; and comparison of production and shipments by States, 1923-1926.

A table shows initial destinations of Pennsylvania grape shipments for 1924, 1925, and 1926 (p.34).

Chart XX, p.30, shows comparison of receipts of peaches, grapes and competitive fruits by months, 15 markets, 1921-1926.

184. Jesness, O. B.

The cooperative marketing of farm products. 292p. Philadelphia, London & Chicago, J. B. Lippincott Co. 1923. (Lippincott's Farm Manuals) 280.3 J49

A chapter entitled Farmers' Monopolies contains a discussion of an investigation by the Federal Trade Commission of the California Associated Raisin Company "now known as The Sun-maid Raisin Growers" as a result of which "the company was prohibited from limiting the supply of raisins or curtailing the production of raisin grapes," etc. by a court decree rendered on January 18, 1922 (p.246-249).

185. Johnson, B. W.

Grapes responsible for annual refrigerator car shortage. Oreg. State Hort. Soc. Ann. Rpt. 17:29-33. 1925.

Mr. Johnson in this address says "that the increasing annual grape movement constitutes a menace to the perishable industry of the Northwest" due to the fact that the grape growers are given preference during times of car shortages because grapes are more highly perishable than apples or pears. He suggests "that the fruit be juiced where grown" and discusses the benefits to be derived from the plan, mentioning the success during the past season in extracting and shipping some 500,000 gallons of juice, with figures for prices received for juice per gallon in car lots, and retail prices in Chicago.

186. Johnston, T. D., and others.

An economic study of the Columbia farm trade area. S.C. Agr. Expt. Sta. Bul. 243, 64p. Clemson College. 1927.

Table 2 (p.63) gives quantities of farm produce (including grapes) of local origin purchased by retail grocers of Columbia in 1925, from truck and from curb market.

187. Johnson, W. F.

Will the grape basket hold enough eggs? Mich. State Hort. Soc. Ann. Rpt. 59(1929):62-67. 81 M58

Mr. Johnston discusses the grape situation from the national viewpoint to show the importance of California in the grape business and the dangerous position Michigan growers are in "relative to planting more grapes;" and includes various statistics of production of the Bureau of Agricultural Economics. He makes some suggestions to the Michigan growers namely: to increase the avenues of consumption of Concord grapes by encouraging research work for the purpose of finding "some health giving properties in the Concord grapes"; to increase tonnage per acre and thus keep down the cost of production by paying more attention to cultural practices; and to diversify. He thinks that vineyards should either be taken care of or pulled out. In conclusion he says, "If you do these things and attend to them we are going to come ahead all right and make the grape business a going thing in Michigan."

188. Joslyn, M. A., and Tucker, D. A.

Removal of cream of tartar from grape by freezing storage. Indus. and Engin. Chem. 22:614-615. 1930. 381 J825

The results of storage experiments with juice prepared from Muscat and Thompson Seedless grapes are given in this short article which concludes that "the separation of excess cream of tartar from grape juice by freezing storage and subsequent thawing is as thorough as by storage at 0° C., and if suitable containers are used in which freezing is rapid the method can be made much more rapid," etc.

189. Joy, A. C.

Little Sun-Maids attain success in first year. Printers' Ink 118: 101-102. 1922. 280.3 M38R
Not examined.

190. Kipps, J.

The Greek currant trade: A study in valorization under public auspices. Econ. Hist. 2(5):137-153. Jan., 1930. 280.8 Ec72E

"The author gives an excellent historical review of the Greek currant trade from 1830 to the present time, including the Retention Law of 1895, the Currant Bank, the Privileged Company for the Development and Protection of the Currant Production and Trade which was granted a charter for twenty years in 1905, and other efforts of the government to stabilize the industry in order to secure adequate prices to the producers. The crisis of 1925 when currant prices were extremely low resulted in the establishment of the present Central Currant Office to which were transferred all of the privileges granted to the Privileged Company in 1905. The fundamental difference between the Central Currant Office and the previous organizations is that the industry is now controlled by a cooperative association."-- Agr. Econ. Lit. 4:101. 1930

191. Latimer, Charles.

The new way of marketing California grapes. Los Angeles Chamber Com. South. Calif. Business. Aug., 1927, p. 12-13.
Not examined.

192. Lea, C. F.

The grape industry and prohibition. Cong. Rec. 73(pt.1):906-907. Dec. 16, 1930. 148.2 R24
A radio address delivered in Washington, D. C., December 2, 1930.

193. Levy, L. C.

History of the co-operative raisin industry of California. 47p. Fresno, Calif. 1928. 95 L57
This booklet consists of extracts from periodicals, newspapers, etc. giving the history of the co-operative raisin industry of California from 1908 to 1928. A chronological summary is given on p. 43-46.

194. Lewis, C. I.

Co-operation makes success out of failure. Amer. Fruit Grower 41(1): 5, 16-17. Jan., 1921. 80 G85
"This is the second of the series of six articles by Mr. Lewis describing the development and functions of some of the large co-operative associations on the Pacific Coast."-- p.5. Part of this article is devoted to the California Associated Raisin Company.

195. Lively, C. E.

Cost of family living on the farm. Report of cost of living studies on 26 Ohio farm families, April 1, 1924 to April 1, 1925. [Columbus, Ohio State Univ. Dept. Rural Econ. n.d.] 8 [14]p. 284.4 L74

Grapes are included in Tables 4 and 5 giving quantities and value figured at farm prices and at Columbus retail prices of products from the home farm, totals for 26 families, April 1, 1924 to April 1, 1925.

196.

Family living expenditures on Ohio farms. Ohio Agr. Expt. Sta. Bul. 468, 36p. Wooster. 1930.

References cited, p.36.

Grapes are included in a table(p.22)giving "Values of farm products furnished by the home farm when priced at farm prices and at Columbus retail prices; products used by 137 farm families, 1927 and 1928."

197. Locklin, H. D.

Grapes in Western Washington. West. Wash. Agr. Expt. Sta. Bimo. Bul. 11(5):106-112. Puyallup. 1924.

For harvesting, storage and marketing see p.111-112.

198. Lord, E. L.

Grape culture in Florida. Fla. Univ. Agr. Ext. Bul 39, 26p. Gainesville. 1924.

This general bulletin on grape growing in Florida, which is a revision of Bulletin 35, contains a brief history of the grape (p.3), two paragraphs each on harvesting and marketing grapes (p.25-26), and a list of varieties, origin, use, etc., suited to Florida (p.14-15). The introductory paragraph gives figures for number of grape vines (estimates of the State Plant Board), pounds of grapes produced and value, in Florida in 1921-22.

199. Lord, Russell.

The roots of the trouble. Country Home 55(11): 14-16, 53-57. Nov., 1931. 6 F22

What California is doing in the way of pulling out thriving peach orchards, and the prospects of the grape growers "adopting a similar pull-out plan" are discussed in this article. The Author says that the Farm Board "does not feel that it is authorized by law to help finance the destruction of vineyards, and there, for the time being, the matter stands."

200. Luedtke, C. L.

The foreign trade of the United States in fruits with special reference to the export markets for apples. Amer. Pomol. Soc. Proc. 39:172-186. 1922 81 Am33

A section entitled Imports of Foreign Fruits, p. 184-186, includes currants, grapes and raisins, with reference to imports of grapes from Argentina and Chile, giving figures for imports in cubic feet, and prices in 1922.

201. M., A. M.

Raisins and the imperial preference. Commerce Mo. 8(7):22-25.
Nov., 1926. 286.8 C7322

Preferential tariff treatment in the United Kingdom and Canada of Australian raisins and the effect on the United States export trade is discussed. The author says, "A year of full preference in both countries, however, has failed to show the damaging results feared and the present outlook for the marketing of California raisins is distinctly favorable."

Three tables give imports of raisins into Canada (6 months) and into the United Kingdom (8 months) by country of origin, and exports of raisins from the United States (7 months) by country of destination, 1923 to 1926.

202. McBride, J. N.

Florida grape industry. Its present development and prospects for the future--how co-operative marketing helps. Manfr. Rec. 94(8): 56-58, illus. 1928. 297.8 M31

Mr. McBride, general agricultural and land settlement agent, Seaboard Air Line Railway Company, names outstanding commercial companies engaged in the grape growing industry in Florida, which industry is centered in Lake County around Montverde and Mount Dora. He names varieties, and gives prices and dates of shipments, and quotes in part a speech of E. E. Truskett, delivered at a meeting of the Florida Grape Growers Association, entitled Co-operative Handling of Grapes.

203. McFall, R. J.

Transcontinental and intercoastal trade of the Pacific Southwest in 1926. U. S. Dept. Com., Bur. Foreign and Dom., Com. Dom. Com. Ser. 25, 95p. 1929.

Tables giving transcontinental shipments of commodities for the calendar year 1926 include rail shipments as follows: grapes (p.63) and raisins and currants (p.67) from the Pacific Southwest by State of destination; and grape and fruit juices to the Pacific Southwest by State of origin, (p.31).

204. McKay, A. W., and Kuhrt, W. J.

Management problems of cooperative associations marketing fruits and vegetables. U. S. Dept. Agr. Bul. 1414, 51p. 1926.

"The discussion in this bulletin refers particularly to the problems of the smaller associations handling fruits and vegetables." p. 1.

Tables give the following data relative to grapes and raisins: total carload shipments of grapes for the calendar years 1920 to 1924 (p.3); number of cars and value of grapes and raisins marketed by 1,141 cooperative associations in 1922 (p.9); relative use of pooling periods of 2 to 3-day and 8 to 15-day durations, and for season, of grapes, made by 14 fruit and vegetable marketing associations, 1922 (p.36); and exports of raisins by 9 countries of destination, years ended June 30, 1922 to 1924 (p.48).

205. McKay, A. W., Samson, H. W., Pailthorp, R. R., and others. Marketing fruits and vegetables. U. S. Dept. Agr. Yearbook 1925: 623-710. Also published as Yearbook Separate 930.
The methods of harvesting, grading, packing, storing, transporting, and selling fruits and vegetables are described. Tables of imports and exports of fruits, etc., 1922-1925 include the following: imports of fresh grapes, quantity (cubic feet) and value, and of raisins, currants and other dried grapes in pounds; and exports of fresh grapes, quantity (cubic feet) and value, and of raisins, by country of destination, in pounds. A table giving duration of pooling period of 478 fruit and vegetable marketing associations, and a chart showing car-lot shipments of fruits, 1920 to 1924, inclusive, include grapes. A section entitled World production and world markets contains a paragraph on currants and two paragraphs on raisins.

206. McKay, Hughina. Food consumption of farm families. Ohio Agr. Expt. Sta. Bul. 433, 34p. Wooster. 1929.
A table (p.19) gives average amounts and values of foods used by 47 Ohio farm families during the year 1926, including grapes and raisins.

207. McNair, A. D. Labor requirements of Arkansas crops. U. S. Dept. Agr. Bul. 1181, 64p. 1924.
The quantity of man and horse labor expended on 10 acres of Concord grapes raised in Arkansas, is illustrated by a chart showing distribution by months, and by a table showing distribution by operations, together with comment on p. 41.
Statistics for grapes are also given in Tables 2-4 as follows: assumed yield per acre (p.5); labor on 10 acres by months, in Washington County (p.8); and labor requirements on 1-acre basis (p.61).

208. Mallory, L. D., Smith, S. R., and Shear, S. W. Factors affecting annual prices of California fresh grapes, 1921-1929. Calif. Agr. Expt. Sta. Hilgardia 6:101-130. Berkeley. 1931.
Literature cited in tables, p.129-130.
Paper No.21, The Giannini Foundation of Agricultural Economics. This study was made with the financial cooperation of the Federal Farm Board.
"This paper presents the results of an analysis designed to discover and measure the influence of the major factors that have affected the season's price of each class of California fresh grapes table, black-juice, and white-juice." p.101.
Tables give the following statistical information relative to grapes: annual shipments and actual and adjusted New York delivered auction prices of California table, Muscat, and black-juice varieties and shipments of other States, 1921-1929; New York delivered auction prices and interstate shipments in carloads and

in percentage of season's total of California table, 1926-1929, weekly; auction sales 1925 and 1926, unloads 1927-1929 and prices and shipments of black-juice, 1925-1929 and Muscat shipments, 1925-1929, weekly; and opening prices of fresh and dried Muscat, 1921-1929.

Charts show the following: relation of shipments of table, black-juice, and Muscat varieties to adjusted New York prices, 1921-1929; relation of opening prices of fresh Muscats to opening price of dried raisins and to fresh Muscat shipments, 1923-1929; estimated expenditure for juice grapes in eastern markets, 1921-1929; weekly New York prices and shipments of California table grapes, 1926-1929; weekly New York temperatures, Muscat shipments and black-juice shipments, auction sales and prices, 1925 and 1926; and weekly New York temperatures, Muscat shipments and black-juice shipments, unloads and prices, 1927 and 1928.

209. Manchester, Charles.

The future prospects of the grape industry. Ohio State Hort. Soc. Proc. 59(1926):73-75.

Advises the growers to employ a good marketing agency, particularly a well managed cooperative organization.

210 Maney, T. J.

Grape production and distribution in western Iowa. Iowa Agr. Expt. Sta. Bul. 199, p.379-399. Ames. 1921.

This is a detailed study of the grape industry centering about Council Bluffs, Iowa, with particular reference to natural advantages, vineyard practices, vineyard statistics, distribution, and agencies of distribution.

The section on vineyard practices includes harvesting. The section on vineyard statistics discusses yields and cost of production with a graph showing relative increase of yield with increase in size of vineyard. Tables give the following data: relation between number of growers, average vineyard production and total district production; and estimated acre cost of production of grapes in the Council Bluffs district.

Transportation facilities, geographical location, ripening season and yield of competing grape districts, competition with other varieties of fruit, and fixed charges of transportation are discussed in the section on distribution. One map shows distribution of grapes from Council Bluffs section 1912-1920, and another shows the location of the districts competing with Council Bluffs in the marketing of the Concord grape. A table shows a comparison of freight rates on basket grapes in carload lots to representative points of distribution, 1916 and 1920.

Agencies of a cooperative, private or commercial and public or direct-to-consumer nature are discussed, p. 394-398. The success of the commercial grape industry is due largely to the influence of the Council Bluffs Grape Growers' Association. Tables show: the re-

lation of vineyard area to membership in the cooperative association; and comparative volume of baskets of black grapes from Council Bluffs district sold through the different agencies, annually, 1912-1920, inclusive.

211. Mann, C. W.

The handling of California table grapes. U. S. Dept. Agr. Circ. 83, 14p. 1929.

Following a short historical introduction is a discussion of the commercial production and principal varieties of table grapes of California, factors to be considered in handling and packing, wilting and shriveling, rain damage, maturity, harvesting or picking, and methods of handling and packing.

Three tables show carload shipments (compiled from the annual numbers of the California Fruit Grower) of fresh grapes from California for the years 1902 to 1912, and of table grapes by varieties for the years 1925 to 1928, and rain damage to Emperor grapes.

Two diagrams show comparisons of careful and ordinary handling as shown by the effect on the keeping qualities of Malaga grapes after 12 days in transit in an iced refrigerator car and 2, 4, and 6 days under market conditions; and, comparison of careful and careless commercial handling, as shown by the effect on the keeping qualities of Flame Tokay grapes after 12 days in transit in an iced refrigerator car and 3, 5, and 7 days under market conditions.

212. Marks, L.

Marketing of Arkansas grapes. Ark. State Hort. Soc. Proc. 47(1926): 53-55. 1927. 81 Ar4P

Tells of an effort made "to get all selling organizations and all local organizations to combine their efforts on the selling problem" in Arkansas "this year."

213. Marshall, R. E.

Some important factors influencing the successful growing of grapes and raspberries. Nebr. State Hort. Soc. Ann. Rpt. 56(1925):225-229. 81 N27

The author discusses the expansion of the grape industry in several States, and grape prices and cost of maintaining an orchard in Michigan.

214. Massachusetts Agricultural College, Amherst.

Terminal marketing of agricultural products in metropolitan Boston. 7 v. in 1. Boston. 1923. Typewritten. 280.3 M382

In cooperation with the Massachusetts Institute of Technology, Boston University, New England Research Council on Marketing and Food Supply, and the United States Department of Agriculture.

Section VI. The Transportation Facilities for Boston's Food supply, by Alfred Perlman. June, 1923.

Grapes are included in a "statement [p. 64, 66, and 68] showing number of perishables commodities received at Warren Bridge- Minot Street..." during 1922.

215. Massachusetts, Department of Agriculture.

Receipts and sources of Boston's food supply, 1929. Prepared by Eleanor W. Bateman, Investigator, Division of Markets. 45p. Boston. 1930. Mimeographed. 389.9 M382

Tables give receipts at Boston as follows: approximate annual of fruits (including grapes), carloads or equivalent, 1925-1929; and monthly for grapes, carloads, by sources of supply, 1929.

Similar statistics are included in Receipts and Sources of Boston's Food Supply [1923] - 1928. Boston. 1924-1929.

[1923-1924] prepared by D. H. Goodwin. [1925] prepared by M. L. Speer. 1926-1928 prepared by E. W. Bateman.

[1924]-1926 include figures for 1922 in tables giving approximate annual receipts of fruits at Boston.

The sources of the figures for fruits are as follows: daily reports of Boston car-lot rail receipts issued by the United States Bureau of Agricultural Economics, and daily reports of receipts of farm produce trucked into Boston, issued by the Division of Markets, Massachusetts Department of Agriculture.

216. Massachusetts, Department of Agriculture, Division of Markets.

The results obtained under the cooperative research project in marketing dated July 1, 1921, between the United States Department of Agriculture and the Division of Markets, Massachusetts Department of Agriculture. 272p. [Boston, 1922] typewritten. 280.3 M38

Binder's title: Produce Market Research Studies, July, 1921 to June, 1922.

Section D. A Study of Traffic Congestion in the Faneuil Hall Market District, Boston, Mass., as it Affects Costs of Food Distribution, by Nathan Cherniack and Herschel M. Bon. 36p. June, 1922.

Contains tables as follows: Appendix B (p.22) includes carloads of grapes received in Boston, monthly, July-Dec., 1921, average price per carload and estimated wholesale value.

Appendix K (p.31) gives trucking charges per unit and per car of grapes in baskets, and units per car and units per one-horse wagon.

217. Mathews, S. J.

Food habits of Georgia rural people. Ga. Agr. Expt. Sta. Bul. 159, 31p. Experiment. 1929.

In co-operation with Georgia State College of Agriculture.

References, p.31.

Table, p.7, gives average number of vines of bunch and scuppernong grapes per family in North and South Georgia and percentage of families having none.

Table, p. 29-30, gives quantities of food used, pounds produced and pounds purchased in North and South Georgia, including grapes, raisins, canned grapes, and grape juice.

This study includes average families in two sections of Georgia, totaling 1,323 persons. Records for the southern group were collected from September, 1925 to September, 1926, and those in the northern group from September, 1926 to September, 1927. The purpose of the study was to determine "how nearly the diets of Georgia rural people approach the standards of adequate nutrition which have been set up

218. Merritt, R. P.

The purpose and status of Sun-Maid Raisin Growers Association (organized under the laws of Delaware) and its relation to the California Growers' Association. A Statement by Ralph P. Merritt, managing director. [3p.] n. p., n.d. Assoc. File.

219. Metropolitan Life Insurance Company, Policyholders Service Bureau.

Marketing California grapes. A report prepared for the California vineyardists association. 128p. New York [1928] 280.3 M56

This "fact-finding survey of grape marketing and distribution" is divided into five parts as follows: Consumer demand for grapes; Packaging for the market; Distribution and sales methods; A Study of the New York market; and Credit aspects of grape marketing. A summary of the survey, and recommendations are given on p. 7-16.

An appendix, p.101-128, consists of tables. Tables 1-30 give replies of retailers and consumers to questions relative to the buying habits and preferences of grapes. Other tables give statistics relative to grapes by districts in California as follows: nationality of labor employed to pick; reasons for preferring to pay for picking on a piece and on a time basis; rates of pay per lug and per hour; number of lugs picked on a time and on a piece basis; cost per ton for hauling; reasons reported for packing table grapes in the field; number of growers using specified sizes of containers, and average net weight in pounds per lug packed in the field for juice grapes; number of growers reporting use of Federal-State inspection and using specified terms of sale for disposal of 1927 crop of juice and table tonnage; number of shippers used per grower in shipping the 1927 crop and in five-year period ending with 1927; number of growers contracting for disposal of their juice tonnage in advance of shipping season; total amount of seasonal credit for both growing and harvesting; sources of long term credit, average land credit per farm and ratio of indebtedness to value of farm, size of farm and grape acreage per farm, value of farm and of grape acreage, and indebtedness per acre of grape land and valuation per acre set by growers as reported by 496 grape growers; valuation per acre set by banks on vineyard land of individual borrowers; average yields in tons per acre for specified varieties; direct labor costs per acre for growing table and juice grapes; and net prices per ton received in 1927 by growers for different varieties.

Other statistical information not by districts follows: Comparison of 1925 unloads of peaches with unloads of grapes in 36 leading markets; cars of California grapes received in New York market by months, 1924 to 1926; cars handled at New York terminal stations, classified by carrier 1924 to 1927; number of packages of Malaga and Alicante grapes sold in the New York City terminal markets at auction on each Monday during the 1926 season together with average prices; analysis of marketing costs of two cars of table grapes sold in New York City in 1927—shipping point to consumer and shipping point to sale at auction and average cost of marketing 17 cars of juice grapes shipping-point to auction and 9 cars of juice grapes shipping point to consumer—October and November, 1927; etc.

The text includes tables also, most of which appear in the appendix in more complete form, including a few as follows: California grapes sold in the New York auctions 1926 by principal varieties; Cost of distributing grapes compared with other commodities; Reasons cited by shippers for use of lugs and crates and for lidded and open lugs; Average packing costs; etc.

The Library has also a brief summary of the complete report issued previous to the publication of the complete report entitled: Marketing California grapes: Summary of Findings 22p. [1928] 280.3 M56S

220. Michigan Laws, Statutes, etc.

Laws relating to the Department of Agriculture compiled in the office of the Department of Agriculture July 1, 1929. By authority. 282p. [Lansing, Franklin DeKleine Co., printers and binders, 1929]

Act No.107, Public Acts, 1913: An Act to regulate the packing for shipment and sale of table grapes, etc., p.65.

Act No.145, Public Acts 1925, as amended by Act No.181, P.A. 1927: An Act to provide for standard grades for grapes, etc. p.66-67.

Same in Michigan Department of Agriculture Bulletin 55, entitled Michigan Standard grades for apples, peaches, pears, grapes, cantaloupes, potatoes: p. 17-19.

221. Millard, Bailey.

Paradoxes of prohibition. Sunset 45(6):38-39, 75-76, 78. Dec., 1920.

Same. Literary Digest 67:47-50. Dec. 18, 1920.

222. Montgomery, E. G. and Kardell, C. H.

Apparent per capita consumption of principal foodstuffs in the United States. U. S. Dept. Com., Bur. Foreign and Dom. Com., Dom. Com. Ser. 38, 51p. 1930. 157.54 D71

A five-page mimeographed supplement, issued in 1931, contains data for 1928, 1929, and 1930.

Tables include the following statistical material: per capita consumption of fresh grapes in pounds, 1899 and average for 1923-1927 (p.27); commercial crop of grapes, 1899, 1909, 1919, 1922 to 1927, including production, exports, imports, and total estimated consumption in tons, and per capita consumption in pounds of all forms of fresh grapes and grapes used as fresh fruit and for juice (p.29), average for 1923-1927 (p.28); production, imports, exports, and total and per capita consumption, 1921, 1923, 1925, and 1927, of raisins and 1923 to 1927 of currants in pounds (with average for 1923, 1925, and 1927 in separate table). (p.34.)

223. Moomaw, C. W.

Foreign trade in fruits and vegetables. Amer. Inst. Agr. Marketing fruits and vegetables, Lesson 15, 59p. Chicago. 1924. 280.3 Am34F

"The author has pointed out the great opportunity for extending our trade relationships with foreign countries and has outlined in detail the procedure for establishing contact with purchasing agents in the several countries."-p.2.

Grapes are included in the discussion of the supply and demand for fruits in the British and Continental European markets.

Table 2(p.11) gives source of origin and month of appearance on the market of principal fruits sold in the British markets, 1920.

224.

Outlets for fruits and vegetables in Latin America and Australasia Amer. Inst. Agr. Marketing fruits and vegetables, Lesson 15, 39p. Chicago. 1924. 280.3 Am34F

Grapes are included in the discussion of the production, requirements of the trade as to varieties, grades, sizes, and so on, of fruits in Brazil, the River Plate countries, and Chile, and in a list of seasons of the various home grown fruits (p.17).

225. _____ and Franklin, M. L.

Markets for American fruits in China, with recommendations for American shippers. U. S. Dept. Agr. Circ. 146, 27p. 1920.

"A contribution from the Bureau of Markets relative to the present status of the fruit industry in China and the possible development of markets for certain American fruits in that country."- Expt. Sta. Rec., 44: 40.

Official quotations of the public market, Shanghai, November 26, 1917, are given in terms of both Mexican and United States currency for grapes, etc.-p.5.

Exports of raisins, etc., from the United States to China proper and Hongkong, 1906-1918 are tabulated.-p. 26.

226. Moomaw, S. B. and Sherman, C. B.

Australia and New Zealand as markets for American fruit. U. S. Dept. Agr. Circ. 145, 16p. 1921.

This is a general bulletin on methods of marketing domestic and imported fruit in New Zealand and Australia, import and export trade, fruit importation laws, cost to American shippers, and possibilities of increasing American trade, in which grapes are mentioned. Tables include statistics as follows: exports of fruit from and imports into Australia, including currants, Sultanas and other raisins, and imports into New Zealand, including dried raisins, grapes, and currants, average for 1912 and 1913; and marketing seasons of home-grown fruit in Australasia, including grapes and currants.

227. Moriarty, D. J.

Foreign trade in fresh fruits. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 90. 103p. 1930. 157.54 T67

"This publication has been prepared in the Foodstuffs Division of the Bureau of Foreign and Domestic Commerce with a view to acquainting

interested persons with present foreign markets for fresh fruits and their takings of fruits from other countries as well as from the United States. In order that fruit importers in foreign countries may obtain a better knowledge of the leading fresh-fruit industries of the United States there has been included a summary of the production of fruits in this country, a review of the various varieties produced by American growers, and excerpts from the Standard grading and packing regulations enforced by the Federal and State governments."- Foreword.

Grapes, p. 73-86. Grape imports chiefly from Argentina, p. 96. A chart (p.1.) shows value of United States exports of fresh fruits in 1928, including grapes. Diagrams show the following: United States grape production, total compared with California (p. 73); and, exports of grapes from the United States, total and to Canada (p. 79).

Tables give the following information relative to grapes: United States production by principal States, 1922-1928 (p. 73); United States car-lot shipments, June to Dec. 1928, by States, and total (p. 74); United States exports, by months, July to Dec., 1926-1928 (p. 80); and, exports from the United States by principal destinations 1924-1928 (p. 81). The sources of the tables are publications of the United States Department of Agriculture and export statistics of the United States Department of Commerce.

228. Mott, P. B.

A survey of roadside markets in New Jersey. N. J. Dept. Agr. Circ. 186. 38p. Trenton. 1930.

This bulletin contains the results of a survey made through questionnaires "designed to solicit information showing the general practices and trends of business in this type of marketing and to bring out, if possible, the importance of roadside markets in the distribution scheme of New Jersey farm products." Monmouth, Atlantic, Burlington, Camden, Cumberland, Bergen and Essex Counties are covered.

Grapes are included in tables as follows: Table III (p.8) shows source of each commodity sold on roadside markets, percentage home grown, purchased from other nearby farms, and purchased from city markets, Atlantic, Bergen, and Essex Counties; Tables IX-C and X-C show quantities and values of commodities sold on Essex and Bergen County roadside markets.

229. Mumford, H. W., Stewart, C. L., Case, H. C. M., and Johnston, P. E.

Developmental study of a rural-urban trade area. Ill. Agr. Expt. Sta. Bul. 326, p.131-²⁰⁸/Urbana. 1929.

Tables include the following information: monthly prices per pound of grapes in the area for year ended Aug. 31, 1928, giving wholesale prices for May, July-December and retail prices for September-November (p.181); and United States census figures for number of grape vines in Rock Island County, Ill., 1900-1925 (p.201) and number of farms reporting grape vines in Henry and Rock Island Counties, Ill., and Scott County, Iowa. 1924.

230. Nebraska, Department of Agriculture, Division of Agricultural Statistics.
Nebraska agricultural statistics, 1923/24-1929. Lincoln. [1924-1930?] 2 N274

Issued in cooperation with United States Department of Agriculture. Division of Crop and Livestock Estimates. Compiled by A.E. Anderson, and others.

1929 includes statistical material relative to grapes as follows: production tons, price, and total value, 1927-1929 (p.25); condition of crops, 1920-1929, July 1, August 1, and September 1 (p.86-87); shipments (cars) 1924-1929 (p.96); production (tons), 1922-1929 (p.110); and production United States 1927-1929, farm value December 1, per unit and total (p. 179). Also table (p. 189) United States selected agricultural exports, 1900-1928, gives raisins (pounds).

Similar statistics may be found in other years as follows: 1923/24 (p.77); 1925 (p.23,78,90,157); 1926 (p.33,112,131,197); 1927 (p.41,110,129,203,214); and 1928 (p.25,98,111,177,188).

231. New England Research Council on Marketing and Food Supply.

Studies of consumer demand for farm products. Cranberries, raisins, citrus fruits, United States Department of Agriculture, New England research council on marketing and food supply cooperating. 3v. in 1. [July 1, 1923] Typewritten. Binder's title used. 280.3 N44

Section I. A questionnaire analysis of Sun-Maid raisin advertising in Greater Boston (Preliminary report). Part I, by S.M. Barg; Part II, by R. M. Jennings. June, 1923.

Questionnaires and methods used and a discussion of the replies are contained in this study of a survey made to ascertain the effect of advertising on the marketing of raisins from the points of view of consumers and dealers in Greater Boston.

Bibliography of articles from Printers' Ink, on raisins and allied subjects, p. 64-67.

For similar surveys see United States Department of Agriculture, Bureau of Agricultural Economics, Division of Information, Reports on Consumer Demand Analyses. 1.9 Ec731R and 1.9 Ec731Rr.

232. New Jersey, Department of Agriculture.

Miscellaneous agricultural statistics for New Jersey. Circ. 69, 19p. Trenton. 1923. 2 N46C

Containers in which New Jersey farm products are commonly shipped to the New York, Philadelphia and Newark markets, including grapes, p. 13.

Percentage of grapes harvested each month, August-October in New Jersey, p.18.

233. New York (State), Department of Agriculture and Markets.

California deciduous fruit case. N.Y. State Dept. Agr. and Markets Ann. Rpt. 1930:118-119. 1931.

Reports the outcome of the case in which the Interstate Commerce Commission ordered reduction in the transcontinental rates on deciduous fruits from California to eastern-defined destinations following a hearing in 1927 at which the New York Department of Agriculture and Markets appeared in behalf of grape shippers in New York.

For further information regarding the case see New York Department of Agriculture and Markets, Annual Reports 1927, p.28, and 1928,p.26.

234. New York (State), Department of Agriculture and Markets. Chautauqua and Erie grape case. N.Y. State Dept. Agr. and Markets Ann. Rpt. 1928:25. 1929.
Reports a hearing beginning on January 16, 1928, at which the New York Department of Agriculture and Markets cooperated with the growers in the presentation of a request for a reduction in freight rates on grapes, and the decision ordering reduced rates effective September 1, with a petition of the carriers for further consideration successfully opposed.
The origin of the case is discussed in the Annual Report for 1927, p.25.

235. Grapes. New York State standards for grading, classifying and packing grapes. Rules and regulations. N.Y. State Dept. Agr. and Markets. Circ. 413. 10p. Albany. 1930.
Law relative to grading of grapes [Article 13-B, Agriculture and Markets Law] p.9-10.

236. Market facilities of the Central Hudson District with a plan for improving such facilities. A report prepared by Harry E. Crouch and E. R. McNeil. 33p. Albany. 1928. Mimeographed.
280.3 N4833.
One of a series of regional market studies carried on by the Bureau of Markets.
Two tables include grapes as follows: Fruits and vegetables grown in five counties in the Central Hudson District in 1924 (data from United States Census of Agriculture for New York, 1925) p.2; and Car-lot shipments out of the District, including grapes from Dutchess and Ulster Counties (figures from United States Department of Agriculture, Statistical Bulletin 19), p.6.

237. New York (State), Department of Farms and Markets.
The fruit industry in New York State. N.Y. State Dept. Farms and Markets. Bul. 147. 344p. Albany. 1923. 2 N482
This bulletin is a revision of Bulletin 79 issued in two parts, by the New York Department of Agriculture, 1916.
Partial contents: The fruit district of New York, by U. P. Hedrick; A look backward on the grape, by L.H. Bailey; Grape-growing sections of New York, by F.E. Gladwin; Production and Marketing of grapes in the Chautauqua belt, by S.J. Lowell; The grape juice industry, by J.F. Welch.
A table showing number of vines and production in pounds of grapes in New York State, by counties (taken from the United States Census, 1920), p. 305-306. A similar table (taken from the United States Census, 1910) may be found in Bulletin 79, pt. 2, p.1339-1340. Bulletin 79, pt. 2 contains the following not contained in the revised bulletin: The New York wine industry, by L.J. Vance, and The grape juice industry, by Gerald Frey.

238. New York (State), Department of Farms and Markets.

New York and Pennsylvania grape deal. Season of 1923. Summary by Mark F. O'Donnell, 13p. Buffalo. 1923. Mimeographed. Pam. Coll.

This report gives figures for grapes as follows: Condition and forecast of production, 1922 and 1923, by States; New York and Pennsylvania grape shipments 1921-1923; prices prevailing at Benton Harbor, Central Lakes, and Chautauqua-Erie, for Concords; approximate value at shipping points, 1922 and 1923; primary destinations of shipments to markets handling ten cars or more during season of 1923; and prices prevailing for Concords, in 2-qt., 4-qt., and 12-qt. climax baskets on various city markets.

For other grape deals see United States Department of Agriculture. Bureau of Agricultural Economics. Division of Fruits and Vegetables. Grape Marketing Summaries. 1.9 Ec741L

239. Newhouse, M. J.

The demand for dried fruit in Germany. U.S. Dept. Agr., Bur. Agr. Econ. Div. Statis. and Hist. Research Rpt. F.S. 47, 26p. 1930. Mimeographed. 1.9 Ec752.

This report which includes raisins and currants, "points out the principal factors bearing upon the German demand for dried fruit with particular reference to the trend in the per capita consumption of dried fruit, the competition of both imported and domestic fruit, and trade practices and marketing developments in the German dried fruit market." - p.1.

Tables give figures, average 1909-13 and 1924-28 as follows: imports (pounds) of raisins and currants into Germany by country of origin (p.4), and imports and exports from Germany of fresh fruits, including table grapes (p.16).

240.

Marketing American dried fruit in Europe. U.S. Dept. Agr., Bur. Agr. Econ., Div. Statis. and Hist. Research Rpt. F.S. 52, 35p. 1930. Mimeographed. 1.9 Ec752.

Raisins are included in this study which discusses the importance of Europe in American dried fruit trade, factors affecting European demand for American dried fruit, including competition from other countries, effect of tariff and other regulations on demand, consumer preferences, etc., and sales practices and marketing developments.

United States exports of raisins by country of destination, average 1910-14 and 1925-29, by customs districts, 1928, by months, 1927/28 to 1929/30, and production of raisins and currants in specified countries, 1919/20-1923/24 and 1924/25 to 1928/29 are included in tables giving statistics of dried fruit.

241. Nichols, P. F.

Sun-drying versus dehydration - a preliminary report. Calif. Dept. Agr. Mo. Bul. 10:191-198. May-June, 1921.

Figures are included in the text for yields and cost of sun drying and dehydrating grapes.

242. _____ and Christie, A.W.

Dehydration of grapes. Calif. Agr. Expt. Sta. Bul. 500, 31p. Berkley. 1930.

Literature cited, p. 30-31.

This publication reports methods developed for the production of the Golden Bleached Thompson raisin "and results of experiments in dehydrating this type of grape."

Tables include the following information: Tons of wine, table, and raisin grapes produced in California, annually, 1924-1929; approximate tonnage of raisin types produced in California, 1925-1929; cents per pound paid to California growers for raisins by types, 1925-1929; cost of drying Thompson grapes entirely in a dehydrater, and partly in the sun and partly in a dehydrater; and effect of maturity on yield and composition, of dipping, and of drying methods on quality, etc.

243. Nicholls, W.D., Jett, C.U., and Galloway, Z.L.

A study of farm organization and management in Mason and Fleming counties. Ky. Agr. Expt. Sta. Bul. 253, p.39-84. Lexington. 1924.

A table, approximate work units for various farm enterprises, includes man labor and horse work units per acre for grapes (p.48).

244. Nixon, S. F.

Grape marketing. N.Y. State Hort. Soc. Proc. 69(1924):178-184. 81 N484

Mr. Nixon says "That in the grape business, too large sums of money have been spent in marketing grapes, some of it entirely unnecessary." In proof he presents figures for amounts of grapes sold, costs of selling, and returns during the last five years, to show the remarkably low cost at which the Chautauqua and Erie Grape Growers Co-operative Association has marketed the grapes of its members compared with other associations. He says a word about the men at the head of the sales organization of this association, and enumerates three things important in grape marketing.

245. Nougaret, R. L.

The California grape situation. 1919/20-1923/24. Calif. Dept. Agr. Spec. Pub. [6,11] 28,38,47. Sacramento. 1920-24.

Report for 1919 has title: California Grape Industry-1919. (With outlook for the 1920 grape crop)

1920/21-1921/22 have title: Status of California Grape Industry.

1919/20-1921/22 are Reports no.1-3 of the Viticulture Service of the California Department of Agriculture.

Preceded by California State Board of Viticultural Commissioners. [Bulletin] 1-15.

The report for 1923/24 gives estimated figures for production, interstate shipments and local consumption of a normal crop of wine, table and raisin grapes in 1924. To support the forecast estimates, comparative figures for former years are given with production based on plantings. The reasons for the small 1924 grape crop are considered with a discussion of frosts and deficient rainfall. Statistical tables show the following: Fresno frost records; rainfall for season 1923-24; production of wines in 1923 and 1920-1923, inclusive; wines in bond, April 1, 1924; comparison of stocks of wines in bond, 1923 and 1924; California grape production for years 1917-1923, inclusive; production of raisins in 1923 and for

the last five years; interstate shipments of grapes in 1922 and 1923, and kinds of cars used; one year's lawful California wine deal April 1, 1923 to April 1, 1924; and a forecast of a hypothetical normal crop and its probable consumption, by districts and by counties, with a summary.

Report for 1922/23 is a preliminary report and gives fewer statistics than the others.

Reports for 1919/20-1921/22 vary as to method of handling, but give statistics of a similar nature. They contain information on marketing, and transportation, and statistics of import, export, valuation, acreage, and car requirements not contained in the later reports.

246. Oley, R. C.

Transportation of New Jersey's fruits and vegetables by truck. N.J. Dept. Agr. Circ. 99, 24p. Trenton. 1926.

Consists mainly of summaries of transportation surveys made by A. L. Diedrich and R. C. Oley in 1925 and 1926. Two tables contain data relative to grapes as follows: estimated production and percentage shipped by rail in 1925 of various important New Jersey crops, and hypothetical production of fruits and vegetables in Monmouth County in terms of car lots, 1923 and 1924. Other tables deal with methods of shipping produce, truck rates, etc.

247. Oregon, Department of Agriculture, Division of Plant Industry.

Oregon standards for grading, packing, certification and package of apples, pears and other fruits, and potatoes. 26p. Salem, Oreg. 1931.

Table grape grades (California types), p.21-22.

248. Overholser, E. L.

A study of the shipment of fresh fruits and vegetables to the Far East. Calif. Agr. Expt. Sta. Bul. 497, 77p. Berkeley. 1930.

Literature cited, p.76-77.

"The preliminary studies reported herewith were made in an attempt to obtain information that may be helpful in the proper utilization of ship refrigeration in the future marketing of California's perishable crops." p.3.

The investigations conducted cover three phases and include grapes. The first two cover (1) the conditions surrounding the cargo stowed in the refrigerated hold, and (2) the response of the experimental cargo, and include a discussion of such phases as temperatures of storage compartments and of fruit, composition of the atmosphere in holds of ships, keeping qualities of varieties in the experimental cargo (p.40-41), influence of the region where grown on the experimental cargo (p.45-46), influence of packing operations on the experimental cargo (p.52-53), size of specimen (p.58), etc.

Tables give the following information: rate of temperature drop in kegs packed with Humboldt nectarines and Malaga grapes in sawdust and placed in refrigerated holds, and rate of temperature rise in kegs packed with Humboldt nectarines in sawdust when removed from refrigerator holds to room temperatures (p.11-13); percentage of carbon dioxide and oxygen in air from the centers of sawdust-packed kegs

and drums of grapes and plums stowed in "forward 'tween" deck and removed from refrigerated compartment to air temperatures (p.25); harvest period and refrigeration period of California shipping grapes by variety (p.40); and loss in weight during shipment through transpiration of water and respiration of sugars and acids by the fruit (p.49).

The third phase covers duties and restrictions on imports and cold-storage facilities in ports visited as follows: Japan, China, the Philippines, Java and Singapore (p.59-75). Figures are given for landing, handling, storage and other charges. A table (p.62) shows rates for cold storage of fruits and vegetables in Kobe, Japan.

Grapes are also included in a table (p.74) giving seasons of shipments of different varieties of fruit from Australia.

249. Overholser, E. L., and Moses, B. D.

Precooling of fresh fruits and temperatures of refrigerator cars and warehouse rooms. Calif. Agr. Expt. Sta. Bul. 496, 34p. Berkeley. 1930.

Literature cited, p.34.

"Because of the interest shown, by shippers of California fruit, in equipment that could be used to cool the fruit before shipment, and because there seemed to be little information upon the rate at which fruit cools under different conditions, an investigation was made by the California Committee on the Relation of Electricity to Agriculture and by the Division of Pomology of the College of Agriculture, University of California, on the temperature changes in certain fruits as affected by different methods of precooling. This investigation covered two distinctive systems, warehouse and car precooling." p.5.

Grapes are included in the discussion (p.10-11 and p.20-21), and changes in temperature in grape boxes as shown by the experiments are tabulated.

250. Overton, M. H. and Edwards, P. K.

The production and marketing of farm products in Wayne County, Indiana. Ind. Agr. Expt. Sta. Bul. 295, 44p. Lafayette. 1925.

Purdue University, Agricultural Experiment Station in cooperation with the Bureau of Agricultural Economics, United States Department of Agriculture.

Grapes are included in Tables VII-IX (p.36-37) which give: total and per capita consumption, amount produced locally and imported of certain fruits, and "how retailers view the comparative quality of locally produced products with imported ones" in Richmond; and total pounds and monthly importations of each fruit imported into Richmond; number of carloads from different points, pounds imported in car lots, pounds imported by rail in less than car lots, and pounds imported by truck from March, 1923 to February, 1924.

251. Owens, C. A.
Marketing grapes. Clemson Agr. Col. Ext. Bul. 67, 11p. Clemson College, S.C. 1925.
In cooperation with the United States Department of Agriculture, Extension Service.
This deals with the marketing of grapes in a popular way, with paragraphs on the following phases: commercial importance, harvesting, picking, trimming, packing, containers, grades, loading, and packing sheds.

252. Pacific Rural Press [weekly] v.1-122; Jan. 7, 1871-Oct. 10, 1931.
illus. San Francisco. 1871-1931. 6 P112
V.48-80, no.15 have title: Pacific Rural Press and California Fruit Bulletin. V.80, no.16-v.108, no.5 have title: Pacific Rural Press.
August 9, 1924 (v.108,no.6) absorbed the California Farmer.
V. 108, no.6-7 have title: Pacific Rural Press and the California Farmer.
V. 108, no.8- date have title: Pacific Rural Press, with which has been consolidated the California Farmer.
Each volume contains an index.
This periodical gives general agricultural news and includes news of the grape industry. A weekly page of market statistics includes Los Angeles and San Francisco prices of grapes, and San Francisco prices of raisins.

253. Partridge, N. L.
Cultural methods in the bearing vineyard. Mich. Agr. Expt. Sta.
Circ. 130, 19p., illus. East Lansing. 1930.
Harvesting the crop, p.17-19.

254. _____
Grape production in Michigan. Mich. Agr. Expt. Sta. Spec. Bul. 121, 20p. East Lansing. 1923; also in Mich. State Bd. Agr. Rpt. 1924, p.381-401.
Size of a commercial vineyard (p.383-384); Harvesting the grape (p.398); Economics of grape production (p.398-400); Grape growing for the local market (p.401).

255. Pennsylvania, Department of Agriculture.
Rules and regulations providing for standard climax baskets for grapes and other fruits and vegetables, and for standard crates, baskets, and other containers for berries, fruits, and vegetables. Penn. Dept. Agr. Gen. Bul. 348, 8 p. Harrisburg. 1920. 2 P38B
In force on and after December 1, 1920.

256. Pennsylvania, Department of Agriculture, Bureau of Markets.
Standards for grading, classifying and packing Pennsylvania grapes. Rules and regulations. Penn. Dept. Agr. Bur. Markets, Circ. A. 8p. Harrisburg. 1929.

257. Perelli-Minetti, Joseph.

Black juice grape varieties in California. 80p. Sacramento. 1929.
95 P412

Issued by California Federal-State Inspection Service, Fruits and Vegetables, California Department of Agriculture, in cooperation with United States Department of Agriculture, Bureau of Agricultural Economics.

"The 'Classification of the Principal Commercial Varieties of Grapes as to Color and Use,' from Special Publication no. 25, of the California State Department of Agriculture, is included, with some additions and slight revision" in this illustrated bulletin issued primarily to assist in the proper identification of black varieties used for juice, and based on studies "made in California during the season of 1928 following preliminary investigations over a number of years." -p. [3]

258. Perold, A. I.

A treatise on viticulture. 696p. London, Macmillan and Co. Ltd. 1927. 95 P42

Bibliography, p. 679-694.

"This work is addressed particularly to readers in California, Australia and South Africa," and is "intended to serve both the student and the practical grape grower." - Preface.

"Prepared largely from the viewpoint of the vinifera grape, this comprehensive treatise takes up the anatomy of the vine and flowers, the physiology of nutrition, propagation varieties, diseases and insects and their control, etc." - Expt. Sta. Record, v.57, 1927, p.341.

Chapter I, entitled General Introduction, deals with the origin of modern viticulture, geographical distribution of the vine (a) general (b) South Africa (c) United States and (d) Australia, and the influence of climate and soil in the production of grapes, etc.

Chapter XIII, the Production and Sale of Table Grapes for Export is mainly from the point of view of the export of grapes from the Cape to London, but discusses general conditions to be satisfied, and factors and operations that play an important part in the production of table grapes for export, and the selling, which includes picking, final trimming, grading, packing, transportation, sale, and the economics of growing. Figures are given for cost of production on four acres of land in Paarl, Stellenbosch or Constantia, S.A., cost of marketing, net profit, net return per acre, and prices obtained for South African export grapes per 10-pound box on the Covent Garden market, 1924 (p.633-635).

Chapter XIV, Products of the Vine, includes vinegar, grape syrup, unfermented grape juice and raisins. Under raisins are Malaga and Muscat of Alexandria lye raisins, and Sultanas and currants, describing picking, preparing, and packing processes.

259. Phillips, R. G., and Fraser, Samuel

Wholesale distribution of fresh fruits and vegetables... for the joint council of the National league of commission merchants of the United States... The Western fruit jobbers' association of America... International apple shippers' association. 256p. Rochester, N.Y., printed by the Fish-Lynan company, inc. [1922] 280.3 p54

"A survey as conducted by the joint council of three commission merchant and shippers' associations among large representative wholesale and commission firms at Boston, New York, Philadelphia, Pittsburgh, and Chicago, in order to ascertain the wholesale selling price of certain fresh fruits and vegetables, freight rates, the relationship between freight charges and the wholesale selling value of the commodities handled, actual handling costs, overhead, and other fixed costs, and to determine the profits or losses made by commission merchants and wholesale dealers in these commodities." - Expt. Sta. Record, v.48, p. 596.

Summary, 83 cars New York and Michigan grapes handled in Chicago during October to December 1920, and summary 140 cars of California grapes handled in Chicago the same season, p.25.

Summary of 223 cars of grapes, p.45.

Other statistical data relative to grapes are included in tables as follows: number moved long and short haul of 9,476 cars of fresh fruits and vegetables (p.12); quantity and value of exports, including raisins and other dried grapes, and imports, including grapes and raisins, from the United States, 1920 and 1921 (source, Bureau of Foreign and Domestic Commerce); production of crops of the United States, including grapes in cars, 1916-1921 (figures furnished by United States Department of Agriculture, Bureau of Markets and Crop Estimates); and "relationship of the 'stated charge' [of refrigeration] under Perishable Protective Tariff no.1, to the costs prior to February 28, 1920, when the commodities moved on the cost of ice basis, in representative movements." (p.209).

260. Pitt, D. T.

Population and food supply of New Jersey. N. J. Dept. Agr. Circ. 179, 76p. Trenton. 1930.

Part II, p.37-49, deals with food supply in New Jersey. "An attempt is made to compare the varieties and quantity of the food produced on New Jersey farms with the varieties and quantity of food sold within the State by retail stores. Mr. C. J. Grant collected figures on food sales in South Amboy and Mr. P. B. Mott collected the figures on food sales in Bridgeton." p.3.

Grapes in pounds are included in lists of commodities giving the following: Total sales and per capita sales (p.39), and sales per male adult (p.42), 1928, cities of South Amboy and Bridgeton, and total sales for State (p.46), and per capita and per adult male sales (p.48) in New Jersey, 1928.

261. Port of New York Authority:

Report on the food supply of the Port of New York District. 74p. Albany. 1922. 389 P83

This report was prepared by a special committee consisting of representatives of the Governmental agencies concerned with the food supply of the Port District.

Appendix A contains the following information relative to receipts at New York Port District: approximate annual (pounds and car lots) of principal fruits, including grapes, based on 1920 and 1921 receipts (p.47); estimated (pounds) of dried fruits and nuts, including raisins, 1920 (p.59); and grapes in carloads, monthly, by sources of supply, 1920 (p.54).

Holdings of raisins (pounds) in public dry storage warehouses in New York City, November 1, 1921, are given in a table on p.35.

262.

Terminal marketing studies. 6 v. in 1. [New York. 1923] Type-written. 280.3 P833

In cooperation with the United States Bureau of Agricultural Economics. Sections I-IV. contain data on grapes: A study of the fruit and vegetable traffic movement within the Port of New York district, by W. P. Hedden; A study of the commercial practices of the produce trade which influence terminal handling, by W. P. Hedden; An analysis of existing cost data on terminal handling of fruits and vegetables, by W. P. Hedden; and Fruit and vegetable terminal facilities by W. P. Hedden and H. Reese.

Tables include the following data relative to grapes: net unloads (cars) and auction sales, 1921; points of unload and sale outside of the central market; cartage rates; unloads (wine grapes) Erie Railroad, Pavonia Avenue, Jersey City shed; approximate number of cars sold by sample size of display, and calculation of floor space in square feet required for displays of California grapes rail-hauled and Almeria grapes water-borne; and display space per car of sample sale and dimensions of floor space required by most used container for grapes and Almeria grapes.

263.

Terminal marketing studies. 7v. in 1. [New York. 1924] Type-written. 280.3 P833T

In cooperation with the United States Bureau of Agricultural Economics.

The following sections include material on grapes: Section V. The New York City push cart markets, by E. R. French; Section VI. A study of the hotel supply trade in fruits and vegetables, by E. P. Crossen; Section VII. Jobbing markets of Brooklyn and Queens.

Section VII includes grapes in a summary of 1923 rail receipts of fresh fruits and vegetables in Brooklyn and Queens Boroughs of Greater New York, p.8.

264. Price, B. M.

The motor truck as a carrier of fruits and vegetables to greater New York. N. J. Agr. Expt. Sta. Bul. 503, 87p. New Brunswick, 1930.

"This is a cooperative study made by the Division of Fruits and Vegetables of the U. S. Bureau of Agricultural Economics, the New Jersey State Agricultural College and Experiment Station, the New Jersey State Department of Agriculture, and the New York Food Marketing Research Council which served as the headquarters during the survey."

Tables include statistical material relative to grapes as follows: for 1928-- comparative condition on arrival of shipments by motor truck and by rail from the same points of origin, based on replies of 16 largest receivers of produce by motor truck in Washington Market, New York City (p.35), estimated percentage hauled by truck, of the total movement, grown in the trucking territory serving New York, reported by 768 fruit and vegetable growers (p.63), and rates (cents per 100 pounds) of public carriers to New York from Highlands, Marlborough, Newburgh, and Poughkeepsie (p.82); for June, 1929 --combined receipts in Wallabout and Gansevoort farmers' markets (p.83); and comparative receipts (car lots), in the New York jobbing markets, as follows-- by motor truck and by rail and boat, August, 1928 to July, 1929, and total for year (p.70-73), by States and sections, of motor truck with rail and boat, August, 1928 - July 1929 and August. - Dec. 1929 (p.76-79), and motor truck with foreign and domestic by rail and boat, August-December 1929 (p.74-75).

265. Price, J. C. C.

Grape varieties. Miss. Agr. Expt. Sta. Bul. 281, 20p. A. & M. College, Miss. 1930.

The results are presented of a variety test which included 55 varieties of bunch grapes and 16 of Muscadines. The average ripening date is given for 18 varieties most suitable for planting.

266. Rabak, Frank.

Grape-seed oil. Jour. Indus. and Engin. Chem. 13:919-921. Oct., 1921. 381 J825

This article recommends the utilization of the waste seeds from the grape juice industry of the United States, "approximately 1,100 tons," annually, for the production of an edible oil. Various authorities are quoted relative to the utilization of grape seeds, particularly in foreign countries, where it "has long been under consideration," and the properties of domestic grape-seed oil from the Concord grape and the oils of foreign origin are compared and shown in two tables. Figures for yields of oil are included.

This article is quoted in part in an article entitled Oil from Grape-seed, in the Literary Digest 71:57, Dec. 10, 1921.

267. Rabak Frank, and Shrader, J. H.

Commercial utilization of grape pomace and stems from the grape-juice industry. U. S. Dept. Agr. Bul. 952, 24p. 1921.

Literature cited, p.23-24.

The possibilities of the utilization, procedure, and most economical methods of treating the stems, seeds and skins for the production of cream of tartar, oil, oil cake, tannin extract, and jelly are pointed out in this illustrated bulletin, and a short historical account is given of the attention to the utilization of grape residue in other countries.

A diagram illustrates products and amounts obtainable from 22,000 tons of grapes, crushed. The text contains figures showing costs and returns calculated on prices prevailing during the winter 1919-20; approximate quantities of waste materials from 22,000 tons of grapes; charges against drying the pomace and separating and bagging the seed; estimated cost for making and packing a dozen glasses of jelly; and the composition of the residue from the manufacture of jelly, reduced to meal, showing value as a stock feed.

Tables I-III give the following: quantities and gross value of products capable of being manufactured from grape seeds by the expeller and solvent processes; estimated cost of shipping the dry grape, pomace, or seed alone from Michigan, New York and Ohio to Chicago, Indianapolis, Philadelphia, and Westfield, N. Y.; and quantities obtained, approximate values, and estimated total gross returns, the cost per unit and total cost of various processes, and net profits from the manufacture of various products from grape waste under the solvent and pressure methods.

This bulletin is summarized in an article entitled "Fine methods to utilize waste of grape-juice factories now thrown away." U. S. Dept. Agr. Weekly News Letter 8:6. June 22, 1921.

268. Randall, R. R.

Story of the "Sun-Maid" raisin. Swedish-Amer. Trade Jour. 20(1): 38-40, 57, illus. Feb., 1926. 286.8 SW3

The story of the Sun-Maid raisin popularly told, in which the author tells why they are good, the three best varieties of raisins, and the chemical and food elements which make them "good for us." There is a brief historical introduction.

269. Rasmussen, M. P.

Consumer demand for eastern grapes in Chicago, Illinois. 1928-29. N.Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Mangt. Farm Econ. 71, p.1569-1573. Ithaca. 1931. 280.8 C812

These data are from preliminary studies, subject to revision, conducted by the Department of Agricultural Economics and Farm Management, New York State College of Agriculture, in cooperation with the Fruit and Vegetable Division, Bureau of Agricultural Economics, United States Department of Agriculture, and the Division of Cooperative Marketing of the Federal Farm Board.

"Messrs. Wessels Middaugh and Ernest Hope, graduate students in the Department of Agricultural Economics and Farm Management, assisted in the field work of this study."

Nine tables give the following information relative to grapes, Chicago, Ill., 1928-29: per capita consumption of, and other fruits competing with eastern and California grapes as reported by 815 families; use or non-use of grapes, as reported by 896 families; and the following relative to eastern grapes: source of supply, as reported by 600 families; containers in which purchased, and quantity used for jelly, juice and table purposes; average prices paid per pound and per container; and reasons why more are not consumed as reported by heads of 797 families.

270. Rasmussen, M. P.

The marketing of eastern grapes by retailers in Cincinnati, Ohio, 1928-29. N.Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Mangt. Farm Econ. 70, p.1528-1533. Ithaca. 1931. 280.8 C812

These data are from studies conducted by the Department of Agricultural Economics and Farm Management, New York State College of Agriculture, in cooperation with the Fruit and Vegetable Division, Bureau of Agricultural Economics, United States Department of Agriculture, and the Division of Cooperative Marketing of the Federal Farm Board.

Ten tables give the following information relative to eastern grapes sold by 273 retailers, Cincinnati, Ohio, 1928-29: quantity sold per store, spoiled, discarded, and arriving in "slack-packed" condition, by different types of retail outlets; varieties of California grapes competing; source of supply; sales by variety and by size of container and average retail prices received per pound; volume of sales and source of supply by income groups; and suggestions made for increasing demand.

271.

Some facts concerning consumer demand for eastern grapes in Philadelphia, Pa., 1928-29. N. Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Mangt. Farm Econ. 70, p.1523-1528. Ithaca. 1931. 280.8C812

These data are from studies conducted by the Department of Agricultural Economics and Farm Management, New York State College of Agriculture, in cooperation with the Fruit and Vegetable Division, Bureau of Agricultural Economics, United States Department of Agriculture, and the Division of Cooperative Marketing of the Federal Farm Board.

"Messrs. Wessels Middaugh and Ernest Hope, graduate students in the Department of Agricultural Economics and Farm Management, assisted in the field work in this study."

Ten tables give the following information relative to grapes, Philadelphia, Pa., 1928-29: per capita consumption of, and other fruits competing with eastern and California grapes as reported by 586 families; use or non-use of grapes as reported by 674 families; and the following relative to eastern grapes: source of supply as reported by 381 families; quantity and percentage of total quantity, used for jelly, juice, and table purposes; containers in which those used for jelly or juice and table purposes were purchased; average prices paid by consumers per pound and per container; and reasons why more are not consumed, as given by heads of 555 families.

272. Rasmusson, M. P.

Some facts concerning the distribution of fruits and vegetables by wholesalers and jobbers in large terminal markets. N. Y. Cornell Agr. Expt. Sta. Bul. 494, 115p. Ithaca. 1929.

"The purpose of the study reported in this bulletin was to gather available facts concerning the costs of distributing fruits and vegetables in terminal markets, and to suggest means by which such costs might possibly be reduced." -p.5.

Tables 8 (p.24) and 40 (p.64) show variations in number of packages of selected fruits and vegetables sold by wholesalers to jobbers and by jobbers to retailers, hotels, restaurants, and other customers, in the New York Metropolitan district, 1924, showing number of packages sold at one sale (usual, and minimum and maximum reported), number of packages per carload, and fraction usual sale is of carload, of grapes in 12-quart baskets.

Table 9 (p.28) gives car-lot unloads of fruits and vegetables in New York City, calendar years 1927 and 1928, including grapes, giving percentage of total of unloads for both years.

273.

Some facts concerning the marketing of eastern grapes by retailers, in Philadelphia, Pa. N. Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Mangt. Farm Econ. 68, p.1440-1444. Ithaca. 1930. 280.8C812

These data are from studies conducted by the Department of Agricultural Economics and Farm Management, New York State College of Agriculture, in cooperation with the Fruit and Vegetable Division, Bureau of Agricultural Economics, United States Department of Agriculture, and the Division of Cooperative Marketing of the Federal Farm Board.

Seven tables give the following information relative to eastern grapes sold by 300 retailers, Philadelphia, Pa., 1928: volume sold per store by different types of retail outlets, and volume of spoiled and discarded, retail sales by variety and by income groups, source of supply in pounds and by income groups, sales in various sizes of containers, and average retail prices received.

274. Ravndal, G. B.

Turkey; a commercial and industrial handbook. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 28, 232p. 1926. 157.54T67

The raisin producing regions of Turkey, varieties, figures for value of exports to the United States 1921-1924, and a table giving production figures for the Smyrna raisin crop 1913-1924 are given on p.104-105. A table (p.178) gives quantity and value of exports to the United States, declared through American consulates, including raisins from Smyrna, 1923 and 1924.

275. Ray, G. S., Tuttle, A. E., and Straszheim, R. E.

Ohio agricultural statistics for 1929. Ohio Agr. Expt. Sta. Bul. 460, 46p. Wooster. 1930.

Grapes are included in tables as follows: tons produced in Ohio, and the United States 1922-1929 (p.24), and price per unit December 1 (seasonal price) and total farm value 1928 and 1929 (p.4).

Similar statistics, including price per unit December 1, and total farm value 1927, are given in Ohio Agricultural Statistics for 1928, by G. S. Ray, T. F. McDonough and R. E. Straszheim, which is Ohio Agricultural Experiment Station Bulletin 442, 1929. The United States Department of Agriculture, Bureau of Agricultural Economics cooperated in these studies.

276. Read, F. W.

The grape deal in the United States. Amer. Fruit Grower 47(1): 10, 24-25, illus. 1927. 80 G85

The "spectacular and sudden" increase in the production of grapes is related in this article which describes the grape-producing areas of the Far West and of the East, including varieties produced, and briefly discusses the "grape clearing house plan" now under contemplation in California as a solution. A table gives comparative grape shipments from important States, seasons 1921 to 1925, with estimate for 1926.

277.

New standardization law on grapes a success. Calif. Dept. Agr. Mo. Bul. 10(9):376-380. 1921.

Relates to the California Fruit and Vegetable Standardization Act of 1921 and its enforcement.

278. Richardson, W. E.

Yakima products worth nearly \$37,000,000. Better Fruit 19(8): 30-31. Feb., 1925. 80 B46.

A table gives production (cars) and values for the year 1924, including grapes and grape juice (figures taken from Yakima publications).

279. Ritchie R. W.

Rescuing a raisin maid. Heroic effort won the great cooperative's fight. Country Gent. 88(27):3-4. July 7, 1923. 6 C833.

The reorganization of the Sun-Maid Raisin Growers in the spring of 1923 under the direction of Ralph P. Merritt, and the "ruinous policy that caused the trouble" are related in this article.

280.

The rise of the raisin. How cooperation and advertising put California's product on the map. Country Gent. 85(23):6-7, 26. June 5, 1920. 6 C353

An interview with Wylio Giffon, president of the California Associated Raisin Company, giving a history of the company.

281. Robinson, F. H., and Jensen, W. C.

An agricultural production, consumption and marketing study in the Greenville, S. C. trade area. S. C. Agr. Expt. Sta. Bul. 240, 83p. Clemson College. 1927.

Consumer demand and net imports are discussed in a section on fruit crops under "Commodity analyses" (p.33-35), and figures are given for consumption per adult equivalent of grapes (pounds) in Greenville, 1924, and quantities of grapes (bushels) of local origin received by retail merchants of Greenville by truck and wagon.

Tables in appendix also give information relative to grapes as follows: average per capita consumption (pounds) of Greenville, S. C. compared with same for Altoona, Pa., Richmond, Ind., and average for United States (p.71); and net imports by rail, Greenville, 1924, of grapes with stems, in crates (p.75).

282. Rogers, S. S.

A clearing house for the distribution of California's grapes and deciduous fruits. Calif. Dept. Agr. Mo. Bul. 17 (4):264-270. Sacramento. 1928.

The writer briefly states what he considers the reasons that are largely responsible for the conditions under which the grape and deciduous-fruit grower is working and then discusses the growth of the grape and deciduous fruit plantings, the organization of the California Vineyardists Association and California Deciduous Fruit Association, and the clearing house. There is one table which shows increase in planted acreage of grapes and principal deciduous fruits in California as shown by the Annual Report of 1926 issued by the California Cooperative Crop Reporting Service. The grape statistics are for the years 1919 and 1927, with forecast for 1929.

283. _____ S. S.

How can the California fruit and table grape grower better meet the requirements of the consumer? Calif. Dept. Agr. Mo. Bul. 18(3):227-239. Sacramento. 1929.

The writer takes up the following points: Grading, standardization and inspection; requirements of the consumers; what the California State Department of Agriculture has recently been doing for the fruit industry; how buyers select their purchases on the auction; suggestions for improvement of specific crops (including table grapes); and general recommendations. The last recommendation is that: "It was the general consensus of opinion among the eastern receivers that California is not producing an over supply of high grade fruits and grapes, but is shipping far too large quantities of low quality, poorly packed produce which not only is difficult for the receivers to handle advantageously, but is cutting down the demand for our higher grade offerings."

Another article by S. S. Rogers with the same title may be found in the Calif. Dept. Agr. Mo. Bul. v. 17, no.9, Sept., 1928, p. 496-505.

284. San Francisco Chamber of Commerce.

Annual statistical report... for the year ending December 31, 1921.
68p. [San Francisco, 1922] 287 Sa5

This is the 10th Annual Statistical Report and gives quotations from the Western Canner and Packer as follows: production, including yearly average for five-year periods 1903-1921, and yearly figures 1916 to 1921 for raisins, and 1920 and 1921 for grapes; shipments of canned and dried fruits, including raisins, from California by rail and sea, 1919 to 1921; and comparative packs of California canned fruits and vegetables, including grapes, 1916 to 1921. It also gives statistics for exports from San Francisco, quantity, 1920 and 1921, and by country of destination, 1921, including raisins; and California production, 1921, including quantity, price and value, for wine and table grapes, and raisins.

Similar statistical material is contained in Annual Statistical Reports 1-9, 1911-1920. "Continues Annual reports of San Francisco Merchants Exchange... The San Francisco Merchants' Exchange succeeded the San Francisco Produce Exchange and was merged into the San Francisco Chamber of Commerce. Their reports include the same type of material." - U. S. Dept. Agr., Bur. Agr. Econ., Agr. Econ. Biblio. 31, pt. V, p.X.

285.

Year book, 1926. [San Francisco. 1926.]

1926 is v.12, no.14, Apr. 14, 1926 of San Francisco Business, published weekly by San Francisco Chamber of Commerce. 287 Sa5y

Tables give statistics as follows: fifteen most valuable crops grown in California, 1923 and 1924, including wine and table grapes, and raisins (p.16); principal domestic commodities exported through the Port of San Francisco, value, fiscal year 1913, and calendar years 1918 to 1925, (p.29) and value and pounds, by countries, 1925, (p.31) including raisins.

286. Sapiro, Aaron.

Co-operative marketing. Amer. Farm Bur. Fed. [Bul. 4], 31p.
[Chicago. 1920]. 280.83 Am3 no.4

An address before the cooperative marketing conference called by the American Farm Bureau Federation July 23 and 24, 1920 at Chicago.

Includes a discussion of the cooperative movement among the raisin men in California, p. 9-17.

287.

Cooperative marketing. N. C. Agr. Ext. Circ. 110, 22p. Raleigh. 1921.

From an address made at Danville, Virginia, May 14, 1921.

This is the story of the raisin business in California, and how cooperative marketing as successfully worked out in California might be applied to the marketing of tobacco in Virginia.

288. Scholl, C. A., and Hedrick, W. O.

The Lansing food survey. Mich. Agr. Expt. Sta. Tech. Bul. 107, 152p.
East Lansing. 1930.

Selected references, p.151-152.

"This survey was designed to present a cross sectional view of the production, distribution, and consumption of the food supply of an industrial center and, at the same time, to become a matter of record and establish a base to which future measurements could be referred." p.4.

Part III.- Fruits and Vegetables, contains a section entitled Lansing's trade in fruits and vegetables for 1927, with statistical tables including information relative to grapes as follows: total estimated local production in bushels and Lansing sales (p.68); farm purchases by retailers (10-lb. baskets) by classes, chain store units and total (p.70); pounds of California grapes imported, for four railways and of Michigan grapes by American Express (p.77); and pounds of Michigan and California grapes trucked in by wholesalers and by chain stores (p.78).

A summary (p.149) includes amount exported by wholesalers and net consumption of California and Michigan grapes in pounds. A table (p.80) gives net per capita consumption.

A table (p.61) shows the number of farms producing grapes and the number producing only grapes of 60 growers deriving incomes from fruits.

289. Schuster, C. E.

Grape growing in Oregon. Oreg. Agr. Expt. Sta. Circ. 43, 16p. Corvallis. 1923.

Varieties of grapes, p.7-10; picking grapes, p.15.

Same article in Better Fruit, v.8, Dec., 1923, p.7,16,18; Jan., 1924, p.9-10; Mar., 1924, p.14-18.

290. Scoville, G. P.

Some results of an economic study of grape farms, east of the Rockies. N. Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Manag. Farm Econ., 69, p.1491-1496. Ithaca. 1931. 280.8 C812

This study was made by the United States Department of Agriculture, Bureau of Agricultural Economics in cooperation with the Departments of Agricultural Economics in the State Colleges of Agriculture in the States of New York, Pennsylvania, Michigan and Arkansas.

Vineyard yields, costs and returns as shown by a study made in the summer of 1929 of 555 vineyards on 548 farms in eight areas during the 1928 season are discussed and the results tabulated in detail in Tables 1 and 2. The importance of soil in determining yields is discussed and Table 3 shows the relation between soils and yield per acre for young and old Michigan (1920-1928) and Chautauqua-Erie (1924-1929) vineyards. Importance of size and methods of selling are considered and Table 4 shows relative profitability of vineyards when grapes were sold to juice factory or shipped by rail or truck for the 8 areas. Table 5 gives number of vines of bearing age 1910 and 1920, total number of vines 1920 and 1925, and percentage 1925 of 1920 as reported in the United States Census, by State, county, or area for territory east of the Rockies.

291. Sears, F. C.

Grape growing in Massachusetts. Mass. Agr. Col. Ext. Leaflet 64, Rev., 16p. Amherst. 1928.

Bibliography, p.16; sections on harvesting, marketing, and storing grapes, p.15-16.

292.

Productive small fruit culture; a discussion of the growing, harvesting, and marketing of strawberries, raspberries, blackberries, currants, gooseberries and grapes. 2d ed., rev., 368p., illus. Philadelphia, J. B. Lippincott Co. 1925. (Lippincott's farm manuals) 94 Sel

Sites and soils for the vineyard, p.273-278; varieties of grapes, p.279-291; and harvesting and marketing grapes, p.346-353.

293. Shaffer, B. E.

Preparation of eastern grapes for market. U. S. Dept. Agr. Farmers' Bul. 1558, 18p. 1928.

This illustrated bulletin describes the harvesting and packing, including packages, the standardization and inspection, and the loading of eastern grapes for market.

A table (p.1) gives car-lot shipments of grapes, by States of origin, 1926.

294. Sham, Donald.

World movement of raisins. A general survey of the production and distribution of raisins. Calif. Countryman 15(8):14,18. Apr., 1929. 6 Un34.

Persia, Turkey, Greece, Spain, South Africa, Chile and Argentina, Australia and California are the countries included in this survey which contains some figures of imports, exports, production, and acreage.

295. Shear, S. W., and Gould, H. F.

Economic status of the grape industry. Calif. Agr. Expt. Sta. Bul. 429, 126p. Berkeley. 1927. Excerpts in Pacific Rural Press. 114:267. 1927.

"This bulletin represents the results of a cooperative study by the Department of Research of the California Development Association and the Division of Agricultural Economics of the College of Agriculture..."

"The primary object of this study has been to analyze the chief available statistical data relating to the industry as a basis for a partial and tentative answer to the question 'what is the economic situation of, and the outlook for, California's fresh-grape industry?'" The question of market distribution has barely been touched upon and no discussion of the cost of producing grapes has been included. Conclusions and a summary of the data obtained are found on p. 5-10.

Twenty-eight statistical tables include the following data: Relative to raisins - United States production, exports, imports and consumption of raisins, imports of currants and consumption of raisins and currants, 1909-1926; and production 1913-1925, farm price and purchasing power 1909-1926, of California raisins, by varieties.

Relative to grapes - estimated commercial output, price and purchasing power of Chautauqua-Erie, 1900-1926; freight and refrigeration rates by rail from California to New York and to Chicago, 1909-1926; bearing, non-bearing, and total number of grapevines 1910, 1920 and 1925, production, 1909, and 1917-1926, shipments, 1917-1926 in the United States by chief States and sections; imports (fresh) into the United States by chief countries of origin, in tons, average, 1910-1914 and annual, 1920-1925; United States monthly shipments by chief sections of origin, 1920-1926; weekly shipments, United States and California by sections, 1920 and 1924-1926; unloads, total from all States and from California by chief cities and groups, 1924-1926.

Relative to California grapes - estimated acreage, bearing non-bearing, and total, by classes, counties, and districts, 1926, and bearing and full-bearing acreage and yield per full-bearing acre, by classes, 1919-1928; estimated commercial production by classes, 1899-1926 and wine grape production by uses, 1899-1918; shipments by counties and districts, 1919-1926; estimates of shipments, 1919-1926 and as table and juice stock, 1921, 1925 and 1926, by varieties and classes; interstate shipments from north of Tehachapi, annual 1895-1926, monthly 1903-1926, and weekly 1913-1917 and 1922-1926; estimated weekly carload shipments by classes 1925 and 1926; number of cars and fresh tons of canned pack, 1910-1926; estimates of output of dried wine grapes and of all grape juice and syrup, 1919-1921; prices and purchasing power of Malagas and Tokays, 1910-1926 and by varieties, 1917-1926 (eastern delivered auction and estimated f.o.b. shipping points), and of chief farm products of grape-producing sections, 1919-1926; and weekly eastern delivered auction prices, per lug, by varieties, 1924-1926.

296. Shear, S. W., and Howe, R. M.

Factors affecting California raisin sales and prices, 1922-1929.

Calif. Agr. Expt. Sta. Hilgardia 6:73-100. Berkeley. Sept., 1931.

Paper No. 20, the Giannini Foundation of Agricultural Economics. This study was made with the financial cooperation of the Federal Farm Board.

This study is an "attempt to discover and measure the influence of the factors that have determined the quantities of California raisins sold annually in the domestic and in the overseas markets during the last eight marketing seasons, 1922-1929," p. 73.

Ten tables give the following statistical information relative to raisins: for 1921-1929 as follows-California sales in the United States and Canada and exports to the United Kingdom and other countries; percentage of California production by varieties; California f.o.b.- rail prices; United Kingdom imports by chief countries of origin; Australian production and United Kingdom imports and declared import value per pound, duty added; and unshipped California stocks in the hands of Sun-Maid and independent packers on September 1, sold and unsold, short tons, sweat box basis, 1921-1930; approximate domestic and foreign sales of California under adverse and moderately favorable demand conditions in the domestic market and under foreign competitive conditions in which the United Kingdom import price, duty added, is the same for both Australia and California; world production by countries, 1921-1930; United Kingdom declared import value per pound, duty added, by chief countries of origin, 1922-1929; monthly United Kingdom import values of California and Australia raisins since September, 1926; and comparison of different series of California raisin prices in cents per pound, 1922-1929.

Charts show the following relative to raisins: net f.o.b. price and quantity, sweat box basis, of California sales, 1921-1929; world production by countries, 1921-1930; relation between quantity and f.o.b. price of California domestic sales; monthly United Kingdom import values per pound of California and Australia raisins, duty added, September 1926 to date; California f.o.b.- rail export prices and United Kingdom import prices per pound, duty added, 1922-1929; relation of California overseas exports to (a) f.o.b. export prices and to (b) the differences between United Kingdom import values per pound, of California and Australia raisins, duty added; and comparison California raisin price series, 1922-1929.

A preliminary analysis in mimeographed form containing 8 pages and 10 tables was issued by the California Agricultural Experiment Station, entitled: What determines California raisin sales. A preliminary report based on an analysis of data for the crop years 1921-1929. C128

297. Sherman, C. B.

Grapes of yesterday and to-day. Forecast Mag. 25:149-151, 188, illus. Sept., 1923. 321.8 F76

The leading varieties of grapes and the important grape-growing sections of the United States are outlined in this article which emphasizes the historical and picturesque phases of the industry. Street markets in Benton Harbor and St. Joseph, Mich. and Los Angeles are described, and several references to grapes in literature are made.

298. Sherman, W. A.

Unifying the commodity industry- three California examples. Coop. Marketing Jour. 2:41-48. Mar., 1928. 280.28 C7824

An address before the National Association of Marketing Officials, November, 1927, part of which is devoted to the clearing house of the California Vineyardists Association. Mr. Sherman, referring to the 1927 season says "that the outstanding triumph of the California Vineyardists' Association is the fifteen thousand carloads of grapes now hanging unharvested on our vines... but the interesting fact remains that the visible supply did not break the market."

299. Shiras, Tom.

Rapid development of grape growing industry in the Ozarks. Manfrs. Rec. 91(3):96-97. illus., 1927. 297.8 M31

Brief histories of the origin of the grape industry on the St. Louis-San Francisco in Washington County, Ark., and on the Missouri Pacific near Hollister, Mo. are included in this article on the rapid growth of the grape-growing industry in northwestern Arkansas and southwestern Missouri in the past six years, and its causes. The text contains a few figures for price of land, acreage, 1926 prices, etc.

300. Showell, H.

An Australian impression of California. Calif. Dept. Agr. Mo. Bul. 19:11-15. Sacramento. Jan., 1930.

Impressions gathered during a tour of the producing districts of California, with special reference to Sultanas, by one with 37 years experience in growing and drying fruit in Renmark, South Australia.

301. Simpich, Frederick.

Raisins for the heathen Chinee and other American dried fruits are competing for place all over the world. Country Gent. 90(10): 8,36. March 7, 1925. 6 C833

This article tells of the success in selling raisins in Holland, Denmark, Japan and China and of some of the methods used, of South China as a potential market for raisins and other dried fruits, and the need for increasing the exports of California raisins.

302. Smith, Edwin.

Storage of fruits and vegetables. Amer. Inst. Agr. Marketing Fruits and Vegetables. Lesson 4, 40p. Chicago. 1923. 280.3 Am34F
Special suggestions for storing grapes, p.25-26.

303. Spilman, H. A., and Davis, R. W.

Containers used in shipping fruits and vegetables. U. S. Dept.

Agr. Farmers' Bul. 1579, 36p. 1929.

Grapes, p. 21-23.

304. Spurlock, Carl.

The oriental markets for California fresh fruits and vegetables.

A report... to the Solano County board of supervisors, Fairfield, California, March 1, 1930. Calif. Dept. Agr. Mo. Bul. Sup. v.19, no.3-4, 55p. Sacramento. Mar.-Apr., 1930.

Grapes are mentioned among other fruits in demand in this report which is arranged by markets of the Orient. The data were gathered on a four-months' trip from September 13, 1929 to January 22, 1930.

The author says, "The purpose of my presence on the trip was to discover what I could about each market and the agencies in them upon which California growers and shippers must rely if they do business. Such observations naturally included methods of handling and selling, consumer and trade preferences and prejudices concerning varieties, sizes and qualities, a survey of existing physical facilities and quarantines and business restrictions."

305. Steen, Herman.

California raisin trust. *Wallaces' Farmer* 45:2353, 2356. Oct. 8, 1920. 6 W15

The same article appears also in *Hoard's Dairyman* 60:532. Oct. 15, 1920, and *Prog. Farmer* 35:1693. Oct. 16, 1920.

The story of the California Associated Raisin Company from 1912 when it controlled 77 per cent of the raisins until 1920 when it "markets 90 per cent of all the raisins produced, thus having a virtual monopoly over the industry," and constitutes "the only farmers' trust in the world." The article quotes Wylie M. Giffen, president, who tells why he "objects vigorously to his organization being classed with other trusts," and why the raisin association has proved successful. It tells briefly of the investigation by the Federal Trade Commission "during the past two years," the prosecution by the Department of Justice now in progress, and enumerates four points on which "the speculators attacked the raisin growers."

306.

Cooperative marketing; the golden rule in agriculture. 366p. New York: Doubleday, Page & Co. 1923. (American farm bureau federation library.)

Chapter III, entitled "Sun-Maid and Sunsweet: dried fruit associations score sensational successes," discusses the following on p.21-29: development of raisin cooperation; California Associated Raisin Company; prosperity through cooperation; and "busting the raisin trust." A table gives average price received per ton for Muscats, 1913-1920 (figures taken from the California Associated Raisin Company's records).

307. Stillwell, E. W., and Cox, W. F.

Marketing California grapes. U. S. Dept. Agr. Circ. 44, 153p. 1928.

The data contained in this bulletin were collected in 1927 through the cooperation of the California Vineyardists Association. Following a brief survey of the grape industry and a review of the 1927 season are 33 tables giving information relative to grapes as follows: production by States, 1925-1927; car-lot shipments, monthly, by States, 1927, and from the United States, monthly, 1922 to 1927, from important States, yearly, 1921 to 1927, from California (by districts) and total United States, weekly 1927, and estimated shipments, by varieties, weekly, 1926; and carload unloads, daily, in 29 cities, 1927 and monthly in 66 cities, by State of origin, July to December, 1927, and calendar years 1927, 1926 and 1925.

Also relative to California grapes, information is included as follows: estimated acreage, planted in 1926 and 1927, and bearing and non-bearing, 1928, of various classes, by counties, and estimated acreage bearing, 1919 to 1928; estimated production and value 1919 to 1927; car-lot shipments, by districts and classes, daily, 1927, with totals for 1926 and 1927, by districts, monthly, 1925-1927, by billing stations, monthly, 1927, and by counties, monthly crops of 1921-1927; movement by varieties, daily, and August 1-December 31, 1927, cumulative through California gateways, weekly, by varieties, August-November, 1927, and by varieties and loading points, August-December, 1927; grapes shipped by varieties, weekly July 19 to November 1, 1927, and season 1926 and 1927; stations leading in number of cars billed out, 1920 to 1927; shipping-point price ranges in corresponding weeks, 1924-1927, by pack and variety; sales and prices f.o.b. California points cars of U. S. No.1 grapes sold and average price per unit, by varieties, weekly, season of 1927; auction prices in 11 cities by variety and pack, weekly, 1925 to 1927; packages sold and average auction prices, by variety and pack, in 11 cities, monthly, and in corresponding weeks 1925 to 1927; weighted seasonal average prices of reported delivered auction sales, 1925-1927; daily car-lot arrivals, track holdings, and unloads in 29 markets, by classes, 1927; approximate primary distribution 1927, of certain varieties, (by States and cities) beginning August 1, 1927 and approximate distribution, State and division totals and of 71,659 cars shipped (by cities) 1927.

308. Stokdyk, E. A.

The Farm Board's proposal for stabilizing the California grape industry. *Jour. Farm Econ.* 12:467-468. July, 1930. 280.8 J822

This article gives the details of the Farm Board's plan to stabilize the California grape industry, which is "primarily a surplus control plan rather than a marketing plan." The author says that the "effectiveness of the plan will depend upon its reception by California grape growers... Thus far the proposal has been favorably received by the majority of the growers."

309. _____ and Reed, G. M.

Standard packs, packages and grades for Kansas fruits and vegetables. *Kans. Agr. Col. Ext. Circ.* [Bul. ?] 53, 56p. Topeka. 1926. Grapes-baskets, packing, p.35-36.

310. _____ and West, C. H.

The Farm Board. 197p. New York, The Macmillan Co. 1930. 281 St6 California Grape Stabilization Plan, p. 135-139. California Grape Control Contract, Appendix D, p. 186-197.

311. Stoll, H. F., pub.

The grape districts of California... 48p., illus. San Francisco, H. F. Stoll. 1931. 95 St62

This booklet is divided into five geographical regions - Northern California, the Coast Region, the Central Valley, San Joaquin Valley and Southern California - and "gives the location of the vineyards

in each district.... the acreage of bearing vines in every grape county, the carloads shipped outside the borders of the state, the table, raisin and juice grapes for which each section is noted, and historical sidelights that explain the origin of most of the leading varieties." - Introduction.

Each chapter contains a map, and a table on p.46-47 gives car-loads of California grapes 1928-1930 in 66 markets as compiled by the Bureau of Agricultural Economics, with the 1930 census figures added.

312. Stoll, H. F.

Over two and a half million tons of grapes. Amer. Fruit Grower 49(5):5,21. May, 1929. 80 G85

Commercial varieties and their distribution through the grape regions of the United States, the origin of the more important varieties and the leading viticultural investigators in the United States are outlined in this article by the editor of the California Grape Grower.

313. Stover, H. J.

Relation of the production of grapes in western New York and in California to prices. N. Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Mangt. Farm Econ. 59, p.1111-1113. Ithaca. 1929. 280.8C812

Data for this study were obtained from California Agricultural Experiment Station Bulletin 429, Economic Status of the Grape Industry.

314.

Some factors affecting the purchasing power of grapes. N. Y. Agr. Col. Cornell Dept. Agr. Econ. and Farm Mangt. Farm Econ. 45, p.692-695. Ithaca. 1927. 280.8 C812

Table I gives prices of grapes, with calculations of the pur- chasing power in terms of the wholesale price of all commodities, 1904 to 1926, and rainfall, temperature and date of last killing frost in the spring, 1904 to 1920.

Table 2 gives gross, partial, and multiple correlations between purchasing power of price of grapes, and weather factors, 1904 to 1920. Three graphs compare the purchasing power of grapes with the weather factors.

315. Sun-Maid Business [monthly] Nov. 15, 1924-Nov., 1928; v.1, no.1-6, Jan.-June 1931. [Fresno, Calif.] 1924-1931. illus. 95.8 Su7 August and October, 1928, and v.1, no.2, February, 1931 were not published.

Published in the interests of its members by the Sun-Maid Rai- sin Growers of California.

In general the publication is devoted to such information about the Sun-Maid association as policies, sales reports, export business, merchandising problems, advertising plans, financial condition of the company, etc. From November 1924 to July, 1928, each number contains a one-page article by Ralph P. Merritt, pres- ident and managing director, and other articles, unsigned. Begin- ning with January, 1931 the scope of the publication has been en-

larged. It contains articles a good many of which are signed, relative to such phases of the industry, as the grape outlook, foreign competition, place of raisins in the diet, what determines raisin sales, etc.

316. Sun-Maid Raisin Growers.

Statements of financial condition & unsold raisins, May 15, 1923.
6p. [Fresno, 1923] Assoc. File.

The Library, Bureau of Agricultural Economics, also has Statements of conditions as of October 31, 1927, and of November 30, 1927, of Sun-Maid Raisin Growers of California and Sun-Maid Raisin Growers Association.

317. Sun-Maid Raisin Growers of California.

Sun-Maid year book, 1926. A report to the members of the Sun-Maid Raisin Growers of California on the activities of that association.
15p. [Fresno, 1927?] Assoc. File.

"The Sun-Maid Year Book is published to summarize the numerous steps of progress, to supplement the monthly statements and discussions in Sun-Maid Business, and to have in permanent record form the report of the President that has been made at recent membership meetings held throughout the San Joaquin Valley.

"The Sun-Maid Raisin Growers of California is a cooperative marketing organization receiving the raisins produced by its members, manufacturing them under its own brand through the Sun-Maid Raisin Growers Association, and distributing them to the world through its sales agency, Sunland Sales Cooperative Association." -p. 3.

318. Sun Maid Raisin Growers of California, Sun-Maid Committee on the Marketing of Fresh Grapes. Report...

to Advisory council and board of directors of Sun-maid raisin growers of California. 8p. [n.p. 1924] Mimeo graphed. Pam Coll.

This is a report dated January 22, 1924 supplementing one made on December 21, of a committee of the Sun-Maid Raisin Growers of California, appointed to consider proposals for improving the marketing of fresh grapes, in which its investigations in the matter of transportation, standardization, marketing and distribution are summarized, and recommendations for the 1924 season made, together with a resolution adopted at a meeting on the clearing house plan for the distribution of table grapes, setting forth the objects and purposes of the clearing house.

319. Sunland Sales Cooperative Association, Fresno, Calif.

1926 year book... Ralph P. Merritt, managing director. Cooperative merchandising for Sun-Maid Raisin Growers of California, California Peach and Fig Growers Association. 19p. [Fresno, Calif. 1926] Assoc. File.

A report of the 1925-1926 merchandising year. Charts illustrate the increase in consumption of raisins in the United States, 1895-1925, in "off season" raisin sales, in imports of California raisins into the United Kingdom, in exports of raisins, 1923-1925, the success of puffed Muscat sales, Sunland gains against outside packer losses, and decline in cost of Sun-Maid advertising, 1924 and 1925 under Sunland guidance.

320. Sutherland, W. A.

Organization spells success for raisins: California growers unite to put distribution on an efficient basis. *Banker-Farmer* 10(8): 6-7, 13. July, 1923. 284.28 B22

An article on the reorganization "recently completed" of the California Associated Raisin Company under the new name of Sun-Maid Raisin Growers by the legal adviser of the organization until his retirement in 1920.

321. Swartwout, H. G.

Grape growing in Missouri. *Missouri Agr. Expt. Sta. Bul.* 208, 36p. Columbia. 1924.

Harvesting the grape, p.24; Grading and packing, p.24-25.

322. Sweeley, F. M.

The stick in the raisin. *Amer. Forests and Forest Life* 31:346-348, 360. June, 1925. 99.8 F762

The amount of wood required for growing, curing, packing, and distributing the California raisin crop is discussed.

323. Sylvester, S. A., and Sylvester, Mrs. S. A.

Experiences in growing grapes and their results. *Fla. State Hort. Soc. Proc.* 36(1923):94-97. 81 F66

Experiences with growing the Carman grape in Florida, including figures for yields of grapes from two thousand plants in a year, prices received on the local market for first-class grapes and culls, prices received from sale of young, rooted plants, and cost of production per pound. Mention is made of grapes shipped to New York markets with favorable reports from New York City brokers.

324. Szymoniak, B.

Blackberry and muscadine grape culture at Hammond, Louisiana. *La. Agr. Expt. Sta. Bul.* 213, 7p. Baton Rouge. 1930.

A section entitled, Picking and marketing. (p.5-6) gives figures for pounds produced per vine, and returns at 4 cents a pound, as shown by tests with the Thomas variety.

325. Talbert, T. J.

Grape growing in Missouri. *Amer. Fruit Grower* 44(7):7,11. 1924. 80G85

This article gives a brief description of the grape-growing regions in Missouri, devotes several paragraphs to markets and marketing and to cooperative marketing, and includes a few figures for prices and shipments in 1922, and harvesting dates.

326. Taylor, A. E.

Cooperate or bust. *Country Gent.* 101(6):3-5,38. 1931. 6 C 833

An appraisal of the California grape control plan of 1930. The latter half of this article is reprinted in the *California Grower*. v.3.no.7, July, 1931, p.3,4.

327. Taylor, M. A.

California wine growers' troubles. *Rural New Yorker.* 79(4576): 464. Mar. 6, 1920. 6 R88.

Explains why the Department of Agriculture has recommended to Congress that an appropriation be made for the purpose of acquiring the cooperative experiment vineyards in California for resisting stock and grafting experimentation in order to change vineyards from wine to table grapes and help growers meet the now existing conditions.

328. Thayer, P.

Loading baskets of fruits and vegetables into cars. *Penn. State Col. Ext. Circ.* 116, 12p. State College. 1928.

Loading climax baskets, p. 10-12. These are "used extensively in Pennsylvania for the shipment of grapes and other small fruits and vegetables."

329. Thomsen, F. L.

Direct-to-consumer marketing of farm products. *Missouri Agr. Expt. Sta. Circ.* 143, 4p. Columbia. 1926.

This circular deals with the advantages and types of direct marketing, and mentions grapes as one of the products which can be marketed direct to consumer. Among the examples of advertisements for newspapers is a "pick-it-yourself" one for grapes.

330. _____ and Thorne, G. B.

Cooperative marketing for Missouri. *Missouri Agr. Expt. Sta. Bul.* 253, 97p. Columbia. 1927.

Table 25 (p.74) includes grapes in products handled by 33 local fruit and vegetable organizations reporting out of 78, and number of organizations handling each product.

331. _____ and Thorne, G. B.

Economic position of the grape industry in Missouri. *Missouri Agr. Expt. Sta. Bul.* 273, 34p. Columbia. 1929.

"Price-production curves, supply-price curves, and coefficients of gross, partial, and multiple correlations are given showing the relation between Missouri farm prices of grapes, Missouri and Arkansas grape production, American grape production, and California grape production. The competition between different types of grapes and different producing areas and the past and probable future trends in the grape industry are discussed. Tables are given showing the cost and labor requirements per acre of developing a vineyard and of producing grapes. The possibilities of increasing returns by improved marketing methods are also discussed." - Expt. Sta. Rec. 62:482. 1930.

332. Tisdale, F. S.

The silent revolution in railroading. *Nation's Business* 14(11): 33-35, illus. Oct., 1926. 286.8 N212

This is the second of a series of three articles on the significance of the Shippers' Regional Advisory Boards. This part describes how the Advisory Boards and Carriers solved the difficult problem in the transportation of the California grape crop.

333. Truskett, E. E.

Grape problems of Florida. Fla. State Hort. Soc. Proc. 38(1925): 195-199. 81 F66

The writer devotes several paragraphs to the question of marketing, and to the profits in the business of grape growing in Florida, and include some figures for prices received. He says that there are really too few data available to make definite statements. He also includes brief discussions of yields and cost of production.

334. Truskett, E. E.

The next step in the development of the grape industry. Fla. State Hort. Soc. Proc. 39(1926):215-220. 81 F66

After describing the experimental and developing stages of grape growing in Florida the speaker in this address before the Florida State Horticultural Society says in conclusion, "it would seem... that the proper time has arrived for the members of this society and the people of Florida generally to seriously investigate this grape industry, and if found to be what has been claimed, then it is time for all of us to recommend the growing of bunch grapes in Florida so that many growers may profit in the business during the next stage in the development of the grape industry, the commercial stage." Some figures for yields in production and prices "obtained last season" are included.

335.

The present status of the grape industry in Florida. Fla. State. Hort. Soc. Proc. 42(1929):30-87. 81 F66

The early failures, present conditions, some predictions for the future, and conditions necessary to success in grape growing in Florida as shown by past experiences are set forth in this article. The one problem yet to be solved is "that of marketing, and a great deal of work has been done on this, and considerable success attained," and while the Florida grower has very little to fear from the marketing angle with a monopoly of the market, "nevertheless, a great deal of good can be accomplished on the marketing end," says the author. Prices are given, with an average of \$162.00 a ton last season which is "three or four times the price usually averaged by northern and California grapes."

336. Tucker, E. H.

The raisin industry in California. Commerce Jour. [Univ. South. Calif.] 4(1):14-17. Aug., 1923.

A summary of three lectures to the Marketing Class of the University of Southern California by E. H. Tucker, Director of Research, First National Bank of Los Angeles, in which he "traces the steps in detail, which led to the successful marketing of the raisin, and the formation of the now nationally known 'Sun-Maid' raisin organization."

Three charts show United States exports and imports of raisins, 1906-1924, California raisin production and value of crop, 1900-1924, and price per ton received by raisin growers, 1910-1923.

337. Tukey, H. B.

Fruit regions and varieties of eastern New York. N. Y. State Agr. Expt. Sta. Bul. 563, 82p. Geneva. 1929.

"Dividing eastern New York into three general pomological regions as follows: (1) Champlain Valley, (2) Hudson Valley, and (3) Long Island or coastal region, the author discusses the general soil and climatic conditions in each of these areas and describes in brief, nontechnical words the principal varieties of apples, crabapples, pears, quinces, cherries, peaches, plums, grapes, bush fruits, and strawberries in the respective regions." - Expt. Sta. Rec. 61: 340. 1922.

338.

Grape varieties in general. Rural New Yorker 87:1470. 1928. 6 R88

An article on black, red and white varieties and their characteristics.

339. Tydings, M. E.

Use of wine-grape concentrates. Cong. Rec. 74. (pt.4):3931-3937. Feb. 4, 1931. 148.2 R 24

340.

Use of wine-grape concentrates. Cong. Rec. 74 (pt.4):4107-4117, Feb. 6, 1931. 148.2 R24

341. United States Congress. House. Committee on Ways and Means.

Tariff information, 1921. Hearings on general tariff revision...7 parts. Indexed. Washington, D. C., 1921. 285 Un37 Ta

Part V, Schedule N-Sundries, free list, contains a brief of the New York Fruit Exchange and associated organizations, New York City, containing a section on Almeria grapes, which opposes raising the duty on these grapes, (p.4017).

342. United States Congress. House. Committee on Ways and Means.

Tariff readjustment-1929. Hearings... 70th Congress, 2d session. Washington, D.C., Govt. print. off. 1929. 18v. 285 Un37 Trf

Schedule 7, Agricultural products and provisions, contains the following: Summary of information submitted by the American Farm Bureau Federation, relative to schedule 7, as present and proposed duties, principal competing countries and port of entry, imports, production, price and cost data, etc., which includes grapes, raisins, and currants (p.3605); brief of the American Farm Bureau Federation by W. R. Ogg, which includes a discussion of grapes, raisins, currants, etc., with reasons for increases in duties (p.3666-3668); brief of the National Grange including recommendations relative to grapes and raisins (p.3740); brief of the National Horticultural Council submitted by Charles E. Durst, which contains a tabulated tariff program of the National Horticultural Council, giving present duty, proposed duty, and ad valorem equivalent in 1927, and including grapes, raisins and currants (p.3806-3807) and a section which discusses grapes giving reason for increased

duty and some import statistics (p.3810-3811); briefs of the Dried Fruit Association of New York and of the W. H. Marvin Co., Urbana, Ohio, relative to the duty on currants and raisins, and of the California Vineyardists Association relative to the duty on grapes and grape juice (p.4530-4534).

. . . Schedule 8, Spirits, wines, and other beverages, contains the following: Statement of Levi Cooke and brief of the California Vineyardists Association suggesting a proviso to paragraph 813 as follows: "Provided, That wine spirits made in distilleries connected with wineries may be used, under regulations to be prescribed by the Commissioner of Prohibition with the approval of the Secretary of the Treasury, in the manufacture of grape products as well as for the fortification purposes."

343. United States Congress. Joint Commission of Agricultural Inquiry, Report, Pts. III-IV. Washington, D.C. 1922. (67th Cong. 1st sess. House. Rpt. 408) 281 Un 33A

Pt. III, Transportation, contains the following: Summary of 83 cars of New York and Michigan grapes and 140 cars of California grapes handled in Chicago during the 1920 season, showing what shipper received, transportation, tax on transportation, miscellaneous handling costs and receiving distributors' gross profit (p.40-41). This information is also included in a table giving a summary of 9,476 cars of representative fruits and vegetables on p.31 and P.69, Pt. IV, which is illustrated by a chart opposite p.23, and a similar chart opposite p.69, pt. IV.

Pt. IV, Marketing and distribution, also contains a chart showing average price per 15-ounce package of seeded raisins, 1913-1921, showing retailer's wholesale buying price, retailer's selling price, and margin, p.196.

344. United States Congress. Senate. Committee on Finance.

Hearings... on the proposed tariff act of 1921 (H.R.7456). Rev. and indexed. 14v. Washington, D.C. 1922. 285 Un3T

Schedule 7, Agricultural products and provisions; Schedule 8, Spirits, wines, and other beverages, contains a statement of J. E. Brand, representing the W. H. Marvin Co., Urbana, Ohio, relative to currants. (p. 3080-3081).

345. United States Congress. Senate. Committee on Finance.

Tariff act of 1929. Hearings... 71st Congress, 1st session, on H. R. 2667. Washington, D. C. 1929. 18v. 285 Un3T

Schedule 7, Agricultural products and provisions, June 17, 18, 19, 20, 21, 22, and 24, 1929, contains the following: Brief of the American Farm Bureau Federation submitted by Chester Gray, in which tariff on raisins is discussed along with other fruits (p.31); Brief of the National Grange, presenting in tabulated form the rates of duty under the present act, as provided by H. R. 2667 as it passed the House, and as requested by the National Grange at the hearings held before the Ways and Means

Committee, of various commodities, including grapes and raisins (p.60); Brief of Charles E. Durst, representing the National Horticultural Council, which contains a discussion of the duty on grapes (p.71) and includes grapes and raisins in a table showing present duty, duty allowed by House, and duty requested, for fruits and vegetables (p.68); and Statement of J. P. Crawford, representing the California Vineyardists Association, and a brief, relative to grapes (p.385-388).

Schedule 8, Spirits, wines, and other beverages, June 15, 1929, contains a statement of Jesse P. Crawford, and a brief of the California Vineyardists Association relative to the withdrawal of grape spirits for food-manufacturing purposes (p.19-23).

346. United States Congress-, Senate, Committee on the Judiciary.

Authorizing association of producers of agricultural products.

Hearings... 67th Congress, 1st session, on H. R. 2373. June 2, 7, 9, 10, 11, and 20, 1921. 207p. Washington, D.C., 1921. 280.3 Un35

Among the statements contained in these hearings are the following: John W. Preston, attorney, appearing for the American Seedless Raisin Co., the Bonner Packing Co., Rosenberg Bros. & Co., Guggenheim & Co., and Chaddock & Co., competitors of the California Associated Raisin Co. (p.7-37); Carl E. Lindsay, attorney for California Associated Raisin Co. (p.38-56); and W. M. Giffen, president of the California Associated Raisin Co. (p.89-134). Mr. Preston had printed in the Record a document relative to findings in an investigation made by the Federal Trade Commission of 1919, prices of the California Associated Raisin Co. (p.9-16), and memoranda prepared by him as follows: Brief history of the California Associated Raisin Co., as disclosed by the records of the Federal Trade Commission and Department of Justice which includes statistics of prices to the trade of the various varieties, 1917-1920, and observations on the operation of the Volstead farmers' bill (H.R.2373), as applied to localized products (p.48-55).

347. United States Department of Agriculture.

Crops and markets [weekly] v.1-6, Jan. 5, 1924-Dec.1926. Washington, D.C. 1924-1926.

This publication continues the weekly formerly entitled Weather Crops and Markets, omitting the weekly weather and crop summaries which appeared in that publication, and including monthly crop reports and other monthly statistical summaries in a monthly supplement, q.v. Consult index for material as follows: prices, shipments, market reviews, situation notes, etc. of grapes, and occasional foreign news notes relative to grapes and raisins. Beginning with v.2, no.3, each issue contains a table of weekly shipments including grapes. Volumes 1-3 include raisins in table giving exports of principal agricultural products from the United States (compiled from official reports of the Bureau of Foreign and Domestic Commerce).

348. United States Department of Agriculture.

Crops and markets [monthly] v.4-v.8, no.8, Jan., 1927-Aug., 1931.
Washington, D.C. 1927-1931.

Continues the volume numbering of the Monthly Supplement to Crops and Markets (weekly) and contains similar information. Tables which appear regularly give monthly figures for grapes in season as follows: estimated crop conditions, and carload shipments, by States. Other statistical material relative to grapes appearing occasionally includes production, prices, unloads, etc. The December numbers contain tables giving production, price, and farm value figures for grapes by States for each year with comparisons for the preceding year.

349.

Crops and markets. Monthly supplement, v.1-3, Jan., 1924-Dec., 1926. Washington, D.C. 1924-1926. 1 Ag84Wcm

Tables contain the following grape information: estimated crop conditions July 1-November 1, 1925 and 1926, with comparisons, by States (v.2-3); car-lot shipments for six seasons 1919-1924 (v.1) and during the month and for the season to end of the month, December 31, 1925 to November 30, 1926 with comparisons (v.3) by States; prices to jobbers in 6 cities and total shipments, 1925 of New York and Michigan grapes (v.3) and f.o.b. prices, and in New York and Chicago, 1923-1924, average auction prices (California Malagas) and prices to jobbers (eastern grapes) (v.1.); conditions July 1-October 1, 1923-1926 (v.3) and production, expressed as percentage of full crop, yield per acre, quality and condition on November 1, 1922-24 (v.1) and 1924-26 (v.3), by varieties, for California; estimated quality, 1916-1926 (v.3, p.349), etc.

The December numbers of each volume give production, price and value figures for grapes for each year with comparisons for the two preceding years. Consult the index in each volume.

350.

Market statistics. U. S. Dept. Agr., Bul. 982, 279p. Washington, D.C. 1921. Prepared under the direction of Carl J. West, assisted by Lewis B. Flohr.

Table 280 (p.232) gives monthly and yearly car-lot shipments of grapes, by States of origin, 1919 and 1920.

351.

Prices of farm products received by producers...Monthly prices through 1925 and other data, by states, with comparable data for earlier years. U. S. Dept. Agr., Statis. Bul. 14,15,16, and 17. 1927. 1 Ag84St

Prepared under the direction of Charles F. Sarle and Charlotte M. Ward, Division of Crop and Livestock Estimates, United States Bureau of Agricultural Economics.

Tables give monthly prices per pound, during the season, 1910-1925, for grapes, for the following States: New Jersey, New York and Pennsylvania (in 1. North Atlantic States. Statis. Bul. 14);

Illinois, Indiana, Iowa, Kansas, Michigan, Missouri, Nebraska, and Ohio (in 2. The North Central States. *Statis. Bul.* 15); Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (in 3. South Atlantic and South Central States. *Stat. Bul.* 16); and California, Colorado, New Mexico, Oregon, Utah, and Washington (in 4. Mountain and Pacific States. *Stat. Bul.* 17). The table for Alabama begins with 1917 and for Delaware with 1912.

For prices per ton for grapes for important States 1926 to date, see the December numbers of *Crops and Markets*.

352. United States Department of Agriculture.

Weather, crops and markets, v.1-4, Jan. 7, 1922-Dec. 29, 1923.

Washington, D. C. 1922-23. 1 Ag84We

"Combination of the Market Reporter [issued by the Weather Bureau] and the Monthly Crop Reporter [issued by Bureau of Crop Estimates]" - v.1, no.1, p.1.

Continued by *Crops and Markets*.

Tables in v.4 include statistical material relative to grapes as follows: shipping-point and average auction prices for California grapes, August-October, 1923 and shipping point prices (Concords) from Benton Harbor, September 10-October 8, 1923; condition and estimated production, by States, September 1 and October 1, 1923; shipments by States, July-September, and November, 1923, and carload shipments, weekly, July 29, August 4 to December 16-22, 1923.

V.2 of the Market Reporter includes grapes in tables giving carload shipments, by States, August-October, 1920 and v.4 and the same for July-November, 1921.

Additional statistics, notes, and short articles on grapes are also to be found in these two sets, but the material is relatively unimportant. Consult indexes to the volumes.

353.

Yearbook 1920-1928, 1930-31. Washington, D. C. 1921-1931. 1 Ag84Y

1923-1925 have title *Agriculture Yearbook*; 1926-date have title *Yearbook of Agriculture*. Yearbook which covers 1929 is dated 1930. No. 1 Yearbook dated 1929 published.

1925-1931 each contain a section entitled *Foreign Trade of the United States*; 1924 contains a section entitled *Exports and Imports of Agricultural Products*; and 1920-1923 each contain a section entitled *Imports and Exports of Agricultural Products*. This section from the 1930 Yearbook has been published as Separate No. 1109. These contain statistics as follows:

1931: Destination (by country) of principal agricultural products exported from the United States (pounds and per cent) including raisins, fiscal years 1927 to 1930. 1924 Yearbook includes the same for fiscal years 1922 to 1924, and 1923-1930 Yearbooks include similar tables.

1931: Exports of selected domestic agricultural products, including raisins (pounds), average 1899-1900 to 1903-4 and 1904-5 to 1908-9, and annually, fiscal years, 1909 to 1930, and including grapes annually fiscal years 1923 to 1930 and Jan.-June 1922. Similar tables giving raisin figures appear in Yearbooks 1926 to 1930 and giving grapes in the 1930 Yearbook.

1925: Tables giving quantity and value of domestic exports and imports of agricultural products, United States fiscal years, 1923 to 1925 include grapes, currants and raisins. 1923 Yearbook gives the same for fiscal years 1921 to 1923 with similar tables in 1924 Yearbook. 1920 Yearbook gives quantity and value of imports, including grapes, currants and raisins, and of domestic exports including raisins, of agricultural products of the United States, calendar years 1917 to 1919. Yearbooks 1921 and 1922 give the same for the calendar years 1918 to 1920 and 1919 to 1921.

1931: Principal agricultural products imported into the United States by countries including currants, 1926-27 to 1929-30. 1926-1927 and 1930 Yearbooks contain similar tables.

1925: Imports of selected agricultural products, including raisins and currants (pounds) fiscal years 1909 to 1925. Yearbook 1920 gives the same for fiscal years 1901 to 1918, calendar years 1918 and 1919, and five-year averages 1887-1911. Similar tables are also given in 1921-1924 Yearbooks.

1924: Raisins are included in table giving shipments of agricultural products from the United States to Alaska, Hawaii and Porto Rico, fiscal years 1922-1924.

1925-1931 each contain a section entitled Statistics of Fruits and Vegetables; 1923-1924 each contain a section entitled Fruits and Vegetables; and 1921-1922 each contain a section entitled Statistics of Crops Other than Grain Crops. This section in the 1930 Yearbook has been published as Separate No. 1105. These contain statistics as follows:

1931: Grapes: Production, farm price, imports and exports, United States, 1922-1930, with a similar table in the 1930 Yearbook.

1931: Grapes: Estimated production, by States, 1927-1930. Yearbook for 1923 gives the same for 1922 and 1923, and Yearbooks 1924-1930 contain similar tables. 1927 Yearbook contains in addition a table giving production of grapes by States and districts, 1909, 1919, 1922-1927.

1931: Grapes: car-lot shipments, by State of origin, 1920-1930. Similar tables are given in Yearbooks 1920-1930, the 1922, 1923 and 1924 Yearbook tables beginning with 1917 shipments. The 1921, 1922 and 1923 Yearbooks include also monthly and yearly car-lot shipments of grapes, in the United States, 1917 to date, among other commodities.

1931: Grapes, California: Number of packages sold and weighted yearly average price, auction sales in 11 markets, 1925-1930 (by variety). Similar tables are given in 1927-1930 Yearbooks.

1931: Grapes: Average l.c.l. price to jobbers, specified markets, Oct., 1924-1930. Similar tables are given in 1927-1930 Yearbooks, the 1927 and 1928 Yearbooks including also some November prices for New York Concords and some September prices for Michigan Concords. 1927 Yearbook contains in addition a table giving average l.c.l. price per crate, to jobbers, of California grapes, at Kansas City and Pittsburgh, September and October 1925 and 1927, and August, September, and October 1926, by varieties.

1927: Grapevines: Bearing and nonbearing, by States and districts, census years 1910-1925.

1931: Fruits and nuts: Production and value in California, 1921-1930, including raisins and grapes, by classes. Yearbooks 1923-1930 include similar statistics. Yearbook 1921 contains a table for Fruits and nuts: Production, price per ton, and value in California, 1919-1921, including grapes by classes, and Yearbook for 1922 contains the same for 1920-1922. Yearbook for 1927 contains also tables as follows: Grapes: estimated commercial production in California, by class, 1899-1927; and estimated production of raisins in California, and United States foreign trade in currants and raisins, (by variety), 1913-1925.

1925: Grapes, fresh: International trade, average 1909-1919, annual 1922-1924 (by principal importing and exporting countries).

In addition to these two statistical sections the following may be of interest:

1922: Grapes are included in table (p.988) giving percentage of crops of the United States harvested monthly.

1923: Table (p.1169) gives freight rates 1913 and 1923, including grapes, from Phoenix, Ariz., and Fresno and Lodi, Calif.

A few important articles in the yearbooks have been listed under the author's name.

354. United States Department of Agriculture, Bureau of Agricultural Economics. The agricultural outlook for 1931, prepared by the staff of the Bureau of Agricultural Economics, assisted by representatives of the agricultural colleges and extension services and the Federal Farm Board. U. S. Dept. of Agr. Misc. Pub. 108, 91p. 1931.

The annual agricultural outlook report is prepared in January at a conference of the various commodity and economic specialists of the Bureau, assisted by specialists from other bureaus in the Department of Agriculture, and economists and extension workers from various States. It is designed to bring together facts relative to the situation during the past year, and the probable trends of the coming year in order to help producers to decide upon their plans for the year. The 1931 report, as well as the reports for 1925 to 1930, contains information on the grape situation.

For the agricultural outlook 1925-1927 see United States Dept. of Agriculture, Miscellaneous circulars 38, 65 and 101, and for the reports for 1928-1930 see United States Dept. of Agriculture, Miscellaneous publications 19, 44, and 73.

These are also issued in mimeographed form.

355. United States Department of Agriculture, Bureau of Agricultural Economics. Car-lot shipments of fruits and vegetables from stations in the United States 1920-1929. U. S. Dept. Agr. Statis. Bul. 8, 19, 27, 35. 1925-1931.

Title varies.

Compiled in the Division of Fruits and Vegetables; Bulletin No. 35 by Leona Norgren, No. 27 by Estelle Lawrence and Leona Norgren, and earlier bulletins by Mary Hall.

These bulletins list for each commodity, including grapes, the number of cars billed during the calendar year from every station shipping 10 or more cars, grouped by States and commodities.

Statistical Bulletin No. 8 covers the years 1920 to 1923; No. 19, 1924 and 1925; No. 27, 1926 and 1927; and No. 35, the years 1928 and 1929.

356.

Car-lot shipments and unloads of important fruits and vegetables for the calendar years 1927 and 1928. U.S. Dept. Agr. Statis. Bul. 30, 164p. 1930.

"This bulletin contains tabulations showing the number of car-loads of 18 important fruits and vegetables unloaded during 1927 and 1928 in 66 cities. In addition, tabulations are included showing the number of carload shipments of 37 fruits and vegetables during the same years, segregated by State of origin. These statistics are based upon information secured by the Division of Fruits and Vegetables of the Bureau of Agricultural Economics."

Grapes are included and both monthly and annual figures are given.

For similar statistics 1924-1926, see U.S. Dept. Agr. Statis. Bul. 23. This gives 16 commodities unloaded in 36 cities.

357.

Foreign crops and markets [weekly] v.4, no.4-v.23, no.17; March 1, 1922-Oct. 26, 1931. Washington, D.C. 1922-1931. Mimeographed. 1.9 St2F

For earlier reports see Foreign Crops and Livestock Reports issued by the United States Department of Agriculture. Bureau of Markets and Crop Estimates, no.1-70, April 1, 1919-February 15, 1922 [semi-monthly].

V.4, no.4-v.4, no.21; March 1, 1922-June 28, 1922 issued by the Bureau of Markets and Crop estimates.

Foreign Crops and Markets, from time to time, reports production and marketing conditions of the raisin producing areas of the Mediterranean Basin and Australia, including information relative to the competitive situation in Great Britain and Canada. It contains practically no news on fresh grapes.

Raisins and currants are included in tabular presentations of international trade figures, monthly, appearing somewhat regularly, 1926-date.

The more important articles of interest are as follows:

V.13, July 12, 1926, p.48-53. Northern Hemisphere fruit prospects for 1926. Tables give acreage of grapes and production of raisins and currants in specified countries, average 1909-13, and annual 1921-1925.

July 12, 1926, p.54-57. Progress in the Australian fruit industry. Paragraph on Australian currant prices in South Africa, and a discussion of costs of production in Australian dried fruits industry in 1912 and 1922, including a table of costs of clearing and developing a virgin block of land up to the production stage.

July 12, 1926, p.57-58. The Smyrna raisin situation. A table gives pounds of raisins shipped, 1925, by country of destination.

September 27, 1926, p.409-412. Foreign demand outlook for United States fruit. Three paragraphs on raisins.

December 6, 1926, p.758-783. The dried fruit situation. Tabulations include statistics relative to currants as follows: exports from Greece, 1925 and 1926; imports into Netherlands, Germany, United States, United Kingdom and Canada, monthly, 1924-1926; and stocks in London, October 31, 1924-26; and statistics relative to raisins as follows: production in specified countries, 1920-1926; exports from United States monthly, and from Smyrna, and the Valencia district Spain, seasons, by country of destination, 1924-1926; imports into United States, Canada, the Netherlands, Germany, and United Kingdom, monthly, 1924-1926, by country; stocks in London, by varieties, October 31, 1924-26; and Smyrna prices October, 1925 and 1926, by variety.

V.22, January 26, 1931, p.97-100. The Mediterranean dried fruit and nut crops of 1930. Table includes figures for production of raisins and currants in the Mediterranean basin, 1929 and 1930.

358. United States Department of Agriculture, Bureau of Agricultural Economics. Foreign news on fruit. Report F. S. F. 1-97. Washington, D.C., 1925-1931. Mineographed. 1.9 Ec752F

Foreign news items on grapes and raisins are included in many of these. Those relating more specifically to grapes or raisins are as follows:

Nos. 13, 15, 17, 23, 25, 29, 32, 34, 38-40, 43, 46-48, 50, 53, 55, 60-62, relate to British and German fruit imports. These include raisins and currants in tables of imports into Germany, by principal countries, and into the United Kingdom. They give monthly figures December, 1924 to November, 1927. Nos. 13, 15, 17 and 23 include grapes instead of raisins and currants in table of imports into the United Kingdom.

No. 3. Reduced crop Smyrna raisins; no. 4, Trend of fruit consumption in Great Britain - a table gives imports of raw fruit into Great Britain and Ireland, average 1911-13, 1922; 1924 (excluding re-exports), including grapes and currants; no. 5. Short supplies of Malaga raisins; no. 9. Imperial preference stimulates dried fruit production in Australia - a table gives amount of dried

fruit packed and exported from Australia, 1923-1925, including Sultanias, currants, and Lexias; no. 10. Dried fruit situation in the Mediterranean basin - Smyrna and Spanish raisin prices discussed; no. 12. The British raisin market - Tables give British raisin imports, January 1 to November 30, by country of origin, and monthly from principal countries, 1923-1925, in pounds; and stocks of raisins and currants in London on November 30, 1923-1925, by varieties.

No. 16. British Empire competition with American dried fruit - a table gives imports of raisins into the United Kingdom, 1920-1925; no. 19. The 1925 Canadian fruit harvest - a table gives estimated production and value of commercial fruit crop in Canada, 1921-1925, including grapes; no. 20. Australian dried fruit prospects, 1926 - a table gives production of raisins in Australia, 1923 to 1926, by variety; no. 22. Dried fruit industry in Persia - a table gives quantity and value of exports for the year ending March 20, 1925, by country of destination including raisins; no. 45. Value of the 1926 Canadian fruit harvest - a table includes grapes in estimated production and value of commercial fruit crop in Canada, 1925 and 1926.

No. 73. Marking order recommended for currants, Sultanias and raisins imported into the United Kingdom - tables give imports into the United Kingdom of raisins and currants, by country of origin, average 1910-14, and 1923 to 1927, and exports of raisins from the United States by countries, 1922-1928; no. 82. Canadian fruit crop prospects in July - a table gives estimated production of fruits, including grapes, as indicated on July 1, 1929 compared with final 1928 figures; no. 93. Consumption of fresh fruit in the United Kingdom in 1929 - a table gives imports of fresh fruit into the United Kingdom, 1925-1929, including grapes; no. 96. Larger supply of Mediterranean raisins and currants.

359. United States Department of Agriculture, Bureau of Agricultural Economics. Produce markets...Monthly review of fruits and vegetables. Oct., 1918-Feb. 1928. Washington, D.C. 1918-1928. Mimeographed. 1.9 Ec741M
Discontinued publication. Title varies.
October 1918-June 1921 were published by Bureau of Markets. July 1921-June 1922 were published by Bureau of Markets and Crop Estimates.
Contains some information relative to production trends, shipments and prices of grapes, in season.

360.

U. S. Standards for American (eastern type) bunch grapes (1930). 4p. [Washington, D.C., 1930] Mimeographed. 1.9 Ec74G_b
Recommended 1925; last revision, 1930.

361.

U. S. Standards for juice grapes (1930). 6p. [Washington, D.C., 1930] Mimeographed. 1.9 Ec74
Recommended 1923; last revision, 1930. Drafted with especial reference to California grapes.

362. United States Department of Agriculture, Bureau Agricultural Economics.
U. S. standards for sawdust pack grapes (1931) 8 p. [Washington, D.C.
1931] Mimeographed.
Drafted with especial reference to California grapes.

363. U. S. standards for table grapes (1931). 7p. [Washington, D.C., 1931]
Mimeographed.
Drafted with especial reference to California grapes.

364. United States Department of Agriculture, Bureau of Agricultural Economics,
Division of Fruits and Vegetables.
Daily market reports. Grapes. 1922-1931. Washington, 1922-31.
Mimeographed. 1.9 Ec742D
This report issued during the grape season includes the
number of cars shipped from each State during the previous day,
including shipments by districts and classes from California,
f.o.b. prices, and conditions prevailing in producing areas, and
reports by leased wire from principal markets including state-
ments as to the quality and condition of shipments received,
weather, and general market conditions, track holdings, car-lot
arrivals, and prevailing jobbing prices for American type grapes
produced in the midwestern and eastern parts of the United States.
The following field stations also issue daily reports on grapes
during the season: Fresno, Benton Harbor and Rochester. The
New York Department of Agriculture and Markets in cooperation with
the Bureau of Agricultural Economics issues a daily market report on
grapes at Buffalo. The reports issued at Benton Harbor, Rochester,
and Buffalo cover essentially the same information as the Wash-
ington report except that fewer markets are included. The Fresno
report, in addition to shipments and shipping point market reports
contained in the Washington report, contains market conditions,
and car-lot, jobbing, and auction prices for European types of
grapes.
In most of the 22 branch offices in which representatives of
the Market News Service of the Bureau of Agricultural Economics
are located grapes are included in season among other commodities
in their daily market reports.
During the heavy shipping season the San Francisco office also
serves as a distributing point for information on European type
grapes, issuing a daily report which includes news from producing
and consuming areas.
Previous to 1926 prices of the European type grapes are carried
in the Washington report, but since that date they have been
given in the Fresno, Los Angeles and San Francisco reports only.
Much of the material in these daily reports is summarized and
issued after the close of the season by the Bureau of Agricultural
Economics as Grape Marketing summaries, q.v.
There is also a daily grape report compiled under the direction
of W. F. Cox issued at San Francisco, in cooperation with the
California Vineyardists Association 1928-1929, and in cooperation

with the California Grape Control Board, Ltd., 1930-date. This gives details of daily California shipments by varieties, passings at California rail gateways, and distribution of shipments by classes through midwestern gateways. The 1928 season is summarized in a publication entitled [Information relative to the movement of California grapes and deciduous tree fruits] q.v. The daily report is on file in the Fruits and Vegetable Division of the Bureau of Agricultural Economics or may be obtained from the San Francisco office.

365. United States Department of Agriculture, Bureau of Agricultural Economics, Division of Fruits and Vegetables.

[Grape marketing summaries] Washington, D.C., 1923-1931. Mimeographed 1.9 Ec741L

Marketing California grapes, summary of 1923-1930 seasons. Title varies. In cooperation with the California Department of Agriculture, Division of Markets. 1924 by C.E. Schultz and C.J. Hansen; 1923, 1925 and 1926 by C. E. Schultz; 1928 by H. F. Wilson and J. M. Foote; 1929 and 1930 by W. D. Googe.

Marketing Michigan grapes, summary of 1922-1930 seasons. Title varies. In cooperation with the Mich. Dept. of Agriculture, Bureau of Foods and Standards. 1922-1929 by R. H. Shoenaker; 1930 by R. E. Keller.

Marketing Western New York and Pennsylvania grapes, summary of 1924-1930 seasons. Title varies. New York State Department of Agriculture and Markets cooperating. 1923 by M. F. O'Donnell was issued with the title New York and Pennsylvania grape deal, season of 1923, by the New York Department of Farms and Markets, q.v. 1924-25 by A. E. Prugh and Mark F. O'Donnell; 1927 by H. F. Wilson and M. F. O'Donnell; 1928 by S. W. Russell, A. L. Thomas, and L. D. Spink; 1930 by R. L. Sutton, L. D. Spink; and A. L. Thomas.

These mimeographed reports which summarize the important material contained in the daily market reports on grapes, contain statistics as follows: production, by States; seasonal and monthly car-lot shipments, by States, counties and stations; weekly shipments by districts, and daily by districts and classes of California grapes; primary destinations; car-lot unloads in important markets by States of origin; prices prevailing in city markets; shipping point prices; freight charges per ton; estimated bearing acreage by classes; estimated production by classes, etc. Some of the tables give comparative figures for preceding years. Every report does not contain all of the information noted above.

366.

[Information relative to the movement of California grapes and deciduous tree fruits.] 158p. 1929. Mimeographed. 1.9 Ec741Cg

At head of title: United States Department of Agriculture, Bureau of Agricultural Economics, California Vineyardists Association, Associated California Fruit Industries Inc., and California State Division of Markets cooperating.

The information embodied in this report relative to California grapes 1928 season is as follows: interstate movement by varieties, classes, days, and seven-day periods, and by varieties and ten-day periods showing the counties of origin; approximate distribution (by destination) by classes; primary destinations of Tokays; and Tokay sales.

367. United States Department of Agriculture, Bureau of Agricultural Economics, Division of Fruits and Vegetables.

Monthly summary of car-lot unloads. Jan., 1928-1931, Washington, D.C., 1928-1931. Mimeographed. 1.9 Ec741Um

Title varies.

Total monthly car-lot unloads of certain fruits and vegetables (including grapes) at 29 principal cities, by States of origin.

368.

Summary of carlot shipments of important fruits and vegetables in California, Arizona and Nevada, 1929, by billing stations and including both interstate and intrastate shipments as reported by the transportation companies. Compiled by Opal V. Yeoman.

89p. Los Angeles. 1930. Mimeographed. 1.9 Ec741S

The following statistics relative to grapes are included: Arizona and California car-lot shipments, monthly, 1929, by billing stations; and shipments, 1927-1929, California, Arizona, and total for United States.

Similar summaries for 1925 and 1926 by Homer A. Harris and Opal V. Yeoman, and 1927-1928 compiled by Opal V. Yeoman, also issued in mimeographed form.

369.

Summary of unloads [quarterly] Jan., 1928-1931. Washington, D.C., 1928-1931. Mimeographed. 1.9 Ec741Uq

These reports give the same information, for 37 other cities, as the reports described in item 367, but are issued quarterly only. Monthly unloads for 66 cities are given in these two mimeographed forms.

370.

Truck receipts of fresh fruits and vegetables in 19 cities during 1930. 26p. Washington, D. C. 1931. Mimeographed. 1.9 Ec741Tru

This consists of tabulations including truck receipts of grapes reduced to car-lot equivalents, at 19 cities, by States of origin during 1930.

"The figures given in these tabulations are not considered complete but have been secured from the best informed sources,"

371.

Unloads of certain fruits and vegetables at various cities 1923-1930, Washington, D. C., 1924-31. Mimeographed. 1.9 Ec741U

Annual unloads (car lots) are given by commodities (including

grapes) and by States of origin for each of 31 cities in 1923, 36 cities in 1924 and 1925, and 66 cities in 1926-1930. For similar unload figures 1924-1926 in 36 cities, and 1927-1928 in 66 cities, see United States Department of Agriculture, Statistical Bulletins 23 and 30 entitled: Car-lot shipments and unloads of important fruits and vegetables.

372. United States Department of Agriculture, Bureau of Agricultural Economics, Division of Fruits and Vegetables.

Unloads of grapes in ... cities by States of origin 1923-1930 (car lots including boat receipts reduced to car-lot equivalents). Washington, D. C. 1924-1931. Mimeographed. 1.9 Ec741Un

Annual figures for unloads in each of 31 cities in 1923, 36 cities in 1924 and 1925, and 66 cities 1926-1930, are given in these publications. For similar unload figures 1924-1926 in 36 cities and 1927-1928 in 66 cities see United States Department of Agriculture Statistical Bulletins 23 and 30 entitled: Car-lot shipments and unloads of important fruits and vegetables.

373. United States Department of Agriculture, Bureau of Agricultural Economics, Division of Information.

Reports on consumer demand analyses. Raisin bakery products. Washington, Boston, Minneapolis, 1924. 3v. in 1. [Washington, D. C. 1924] Typewritten. Binder's title used. 1.9 Ec731Rr

Contents.- [v.1] A study of the influence affecting demand for raisins in bakery products [in Washington, D. C.]; questionnaire method of showing some of the influences affecting consumer demand for raisins, June 1924, by Marian Casey.- [v.2] A survey of the factors influencing consumer demand for raisin bakery products in Boston, Mass., by Dudley F. Kimball.- [v.3] Report upon "The factors determining the consumptive demand of raisin bakery products in the city of Minneapolis, Minnesota." June 15, 1924, by F. J. Hosking.

"These surveys are part of a larger work directed toward determining the factors which influence consumer demand for food products and the relative importance of each factor. The plan endeavors to determine consumer buying habits for each product, the place and value of advertising, and to determine more effective and more economical methods of distribution."- [v.2] Preface.

The questionnaire method was used to obtain detailed information from consumers and bakers for the purpose of analyzing, describing, and estimating the demand for raisin bakery products in Washington, Boston, and Minneapolis, and methods used in collecting and analyzing the data, results, conclusions, recommendations, and statistics are contained in each report.

The second part of [v.2] gives a comparison of Sun-maid sales and advertising statistics with results from consumer and baker questionnaires. This volume supplements "another study previously made of the factors influencing consumer demand for raisins." See New England Research Council on Marketing and Food Supply. Studies of Consumer Demand for Farm Products. 280.3 N44.

374. United States Department of Agriculture, Bureau of Agricultural Economics, Division of Information.

Reports on consumer demand analyses. Raisins. Pittsburgh, Cleveland, Detroit, Minneapolis, Des Moines, Louisville, 1923. [Washington, D. C. 1923] unpaged. Typewritten. Binder's title used. 1.9 Ec731R

Regular title: Factors influencing the demand for farm products; questionnaire method of showing some of the influences affecting consumer demand for raisins. November, 1923. Survey conducted under the administrative direction of J. Clyde Marquis... under the technical guidance of Dr. Daniel Starch, professor of advertising, Harvard Graduate School of Business Administration. By Kenneth H. Berst... William H. Heusner, Dudley F. Kimball & Gerald W. Tasker.

This study is similar to the preceding one Reports on consumer demand analyses. Raisin bakery products, (1.9Ec731Rr) in that the Bureau of Agricultural Economics has attempted in both "to work out a system by which the results of artificial means of enlarging markets can be measured," and to answer the question of the advertiser as to whether his advertisement pays, and of the consumer as to "how advertising is affecting his purchases directly from the standpoint of price;" and "helping to encourage larger production by creating new markets." The study "is based primarily upon the relative importance of various factors, such as choice of media, appeals, habits, and different likes and dislikes of buyers." - Preface.

"To get a more or less national perspective of consumer demand for raisins surveys were conducted in six cities, namely, Pittsburgh, Cleveland, Detroit, Minneapolis, Des Moines, and Louisville," by means of questionnaires to obtain information from consumers, dealers, bakers and grocery wholesalers.

The contents are: description of method used; summary and conclusions; consumer analysis according to national groups; consumer analysis according to city averages; results of retailer survey; results of baker survey; results of wholesaler survey; and appendix which contains questionnaires used and statistical tables.

For a similar study completed in June, 1923 in Boston, see New England Research Council on Marketing and Food Supply. Studies of Consumer Demand for Farm Products. 280.3 N44.

375. United States Department of Agriculture, Bureau of Agricultural Economics, Market News Service.

Car-lot shipments of fruits and vegetables, by commodities, states and months, calendar years 1917-1930. Washington, D. C. 1918-31. Mimeographed. 1.9 Ec742Ca

1917-1926 on file in Fruit and Vegetable Division, Bureau of Agricultural Economics.

This includes grapes among the commodities. Figures for 1924-1926 and 1927-1928 are also published in United States Department of Agricultural Statistical Bulletins 23 and 30 respectively. These bulletins are entitled: Car-lot shipments and unloads of important fruits and vegetables.

376. United States Department of Agriculture, Bureau of Agricultural Economics, Market News Service.

Weekly market review of fruits and vegetables. Shipments... and prices to jobbers, May 22, 1917-1931. Washington, D. C. 1917-31. Mimeographed. 1.9 Ec742Wm

On February 3, 1920, this report was combined with the Weekly Truck Crop News issued by the Bureau of Crop Estimates to form the Weekly Crop and Market Review of Fruits and Vegetables. On April 27, 1920 the Weekly Truck Crop News was discontinued and the title changed back to Weekly Review of Fruits and Vegetables.

In other years title varies slightly.

May 22, 1917 to February 3, 1920, and April 27, 1920 to June 28, 1921 published by Bureau of Markets. July 5, 1921 to June 27, 1922 published by Bureau of Markets and Crop Estimates.

This publication summarizes the price and supply situation including grapes during the grape marketing season. 1920-date stapled with this is the mimeographed publication entitled: Weekly Summary of Car-lot Shipments (as reported telegraphically by the common carriers to the Bureau of Agricultural Economics). This gives total number of cars shipped from leading States for current week, preceding week, corresponding week of previous year, and for current season to date with previous year comparison, and total shipment for last season including grapes in season. Monthly summaries of shipments are published in Crops and Markets.

377. United States Department of Commerce, Bureau of Foreign and Domestic Commerce.

Imports of currants, dates, figs and raisins, into the United States, by countries, 1925-date. [Washington, D. C. 1925-date] 157.54 [Im] Monthly. Mimeographed. Statement no. I-525

Gives quantity and value of imports of currants and other dried grapes into the United States, by countries, each month, figures subject to revision.

378.

Commerce yearbook 1930. 2v. Washington, D. C. 1930. 157.54 Y3
V.1. United States--Raisins are included in tables as follows: Production in pounds and value in thousands of dollars 1914, 1923, 1925, and 1927 (p.258); quantity of exports 1926 to 1929 and value 1910-1914 and 1925 to 1929, and quantity and value of exports by country, 1928 and 1929 (p.260).

V.2. Foreign countries--Arranged by countries. Tables include such data as area, production, yield per acre, value, imports and exports of grapes, currants, or raisins if they are important commodities of the country.

Before 1926, the Commerce Yearbook was issued in one volume. For additional statistics see earlier Yearbooks.

379. United States Department of Commerce, Bureau of Foreign and Domestic Commerce.

Schedule A. Statistical classification of imports into the United States, with rates of duty and regulations governing the preparation of monthly and quarterly statements of imports. Effective Jan. 1, 1931. 175p. Washington, D. C. 1931. 157.91Sch2

This schedule "exhibits the statistical classification of imported merchandise required by section 484 (e) of the tariff act of 1930 to be given on entries before they are forwarded by collectors of customs to the Section of Customs Statistics at New York for preparing the monthly and quarterly statements to be furnished to the Bureau of Foreign and Domestic Commerce... prepared solely for statistical purposes and will not be deemed authority for deciding the rate of duty properly chargeable upon any imported article."

Unit of quantity, rate of duty, and tariff paragraph are given in this list of articles, including grapes, raisins, other dried grapes, and Zante or other currants (p.16) and grape juice, grape sirup, and similar grape products (p.22).

380.

Statistical abstract of the United States, 1930. 876p. Washington, D. C. 1930. 157.9 St2

Average wholesale price per pound of raisins, coast, seeded, New York, 1923-25 and 1925 to 1929 (from Department of Labor index of wholesale prices), page 324. Quantity and value of exports of grapes 1922-1925, 1926, 1927, 1928 and 1929 and of raisins, 1910-1914, 1921-1925, 1926, 1927, 1928 and 1929, p. 516.

Quantity and value of imports of grapes, currants, raisins and other dried grapes, and wine, 1910-1914, 1921-1925, 1925, 1926, 1927, and 1928, p. 564.

Number of vines of bearing age, pounds harvested, average yield per vine in States having irrigation enterprises on irrigated and nonirrigated land, and value of grapes, 1919. (from Bureau of the Census), p. 614.

Production in pounds, 1899, 1909, and 1919, and value 1909 and 1919 of grapes, p. 679.

Pounds used and value of raisins in food manufacturing industries, 1914, 1925, and 1927, p. 725.

Earlier editions of the Statistical Abstract of the United States contain similar statistics. More complete statistics relative to wine, such as exports, consumption, prices, etc. are given in earlier editions.

381.

Sunland sales cooperative association, Fresno, Calif. U. S. Dept. Com., Bur. Foreign and Dom. Com., Dom. Com. Ser. no.6. Market Research Agencies; 1923 edition, p. 130-131, and 1930 edition, p. 169. 157.54 D71

An account of the research activities of the Sunland Sales Cooperative Association.

382. United States Department of Commerce, Bureau of Foreign and Domestic Commerce.

Trade information bulletins no. 1-765. Washington, D. C. 1922-1931. 157.7 C76DT

Nos. 23-324 issued as Supplements to Commerce Reports, published by the Bureau of Foreign and Domestic Commerce.

Partial contents as follows:

No. 158. 1923. British Honduras; a brief review of its resources, trade, and industry, by L. W. James.

Value of raisins, year ending June 30, 1913 and 1918 to 1921 are included in a table on p.13 of United States exports to British Honduras.

No. 260. 1924. Nonintoxicating beverages in Latin America. Compiled in the Foodstuffs Division.

"In order to determine the conditions under which nonintoxicating beverages are consumed, the equipment and ingredients used, and the possibilities of developing a larger demand therefor in Latin America, a survey was made through official representatives in those countries." P. II. Countries included are Bolivia, Brazil, British Guiana, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Salvador, and Uruguay. Grapes are mentioned among flavors in demand in several instances.

No. 271. 1924. Relation between value and volume of agricultural exports, by H. M. Strong.

Raisins, p.44. Tables giving agricultural exports from United States show value 1910-14, and value, volume and index numbers of principal items 1915 to 1923, including dried raisins (p.61-63) and for all commodities, value, volume and value at pre-war average price, including grapes, 1922 and 1923, and raisins 1921 to 1923, and value, volume, and average unit price, average 1909-10-1913-14, including raisins (p.73).

No. 277. 1924. The Chinese market for American foodstuffs, by Leslie A. Wheeler.

Table (p.5) shows the exports of dried fruits, including raisins, by quantity and value from the United States to China, Hongkong, and Kwantung for 1922 and 1923.

No. 325. 1925. The Cuban market for American foodstuffs, by Leslie A. Wheeler.

Tables give imports of fresh fruit, including grapes, and of dried fruits and nuts, including raisins, into Cuba 1913, 1920 to 1923, by country of origin.

No. 351. 1925. Markets of northern Chile, by Rollo S. Smith.

Table (p. 19-20) gives imports (including raisins) into northern Chile by ports, 1923.

No. 355. 1925. Foodstuffs export trade of the United States, by Leslie A. Wheeler.

Tables showing exports from the United States include among principal fruit exports quantity and value of grapes 1922 to 1924, and of raisins 1910-14 average and 1920 to 1924. (p.7-8), and among exports to Germany pounds of raisins, 1913, 1922 to 1924.

No. 380. 1925. The Mexican market for United States food-stuffs, by Leslie A. Wheeler.

Tables (p.7) giving exports of fruits to Mexico from the United States include grapes 1922 to 1924, and raisins 1912-13, 1922 to 1924, in thousands of pounds.

No. 402. 1926. Caribbean markets for American goods. VI. Porto Rico, by M. J. Meehan.

A table (p.16) gives shipments of merchandise from the United States to Porto Rico, including pounds and value of raisins, 1923 to 1925.

No. 525. 1928. Trade of the Pacific Coast States with the West Coast of South America, by Spencer B. Greene and Robert M. Lane.

A table (p.22) gives exports from the Pacific Coast of the United States to, and total imports into Ecuador, Peru, Bolivia, and Chile, 1926, including raisins. Price of raisins in Chile, July 12, 1927, given in the text.

No. 534, 1928. Market for canned foods in British Malaya, by John H. Bruins.

"This comprehensive report... describes the canned-food market of British Malaya, the extent to which United States products have already entered the market, and indicates possibilities for further development in that area."--II. A section entitled Fruit Juices (p.14) includes retail prices of American-made grape juice, and Canned Fruit (p.8-9) includes retail price of canned muscat grapes no. 2 1/2 cans.

No. 587. 1928. Markets for fresh fruit in the Netherland East Indies, by D. C. Bliss.

Marketing conditions and seasons for United States grapes in Java and varieties in demand are discussed, and c.i.f. prices per keg for United States and Australian grapes are given in the text. Grapes are included in tables giving imports of fresh fruit, 1926 and 1927, into Java, quantity and value, and into Java and Madura, quantity, by sources.

No. 592. 1928. Market for dried fruit in the United Kingdom, by R. S. Hollingshead.

"This bulletin presents a brief review of the dried-fruit industry in the United States and of the market for its products in the United Kingdom. The market is not developed to its fullest possibilities."

Tables give dried fruit statistics as follows: California production in tons, 1890, 1900, 1910, 1920-1927 and pounds exported from United States, 1922-1927, and by leading customs districts and by months to United Kingdom, 1925-1927 including raisins; pounds of raisins and currants imported into United Kingdom by country of origin and reexports by destination, 1924-1927; and approximate dates of arrival in United Kingdom of first shipments including raisins, Sultanas and currants from producing countries other than the United States.

No. 604. 1929. The Brazilian foodstuffs market, by M. A. Cremer.

Contains a section on fresh, dried and canned fruit, which discusses the competition in the Brazilian market, mentioning the possibility of California competing in the Brazilian market in fresh grapes, and the difficulty of introducing seedless raisins for cooking purposes as they are in demand only as a condiment. Table (p.16) includes imports of fresh grapes into Brazil, 1925-1927.

No. 610. 1929. Market for American foodstuffs in Siam, by Don C. Bliss.

A section on dried fruits (p.12) discusses raisins, giving 1,000 cases or more a month as the approximate consumption (according to dealers) most of which are of one American brand, shipped into the country from Shanghai.

No. 620. 1929. Market for foodstuffs in the Netherland East Indies, by Don C. Bliss.

A section on canned fruits discusses varieites in demand, import duties, prices, opportunities for American trade, etc. Wholesale prices quoted in 1928 per case and retail prices per no. 2 can based on above allowing a wholesalers' profit of 10 per cent and a retailers' profit of 20 per cent are listed, including choice and standard canned grapes. Two tables give imports in cases of American canned fruit, including grapes into outer posessions, and into Java, 1926.

No. 662. 1929. The market for foodstuffs in Colombia, by H. P. Macgowan.

Sections on fresh and dried fruits and canned fruit (p.31-34) mention raisins and grapes. Raisins are included in a table giving United States exports of dried fruit to Colombia in 1928.

No. 676. 1930. Dried fruit industry and trade of South Africa, by Cecil M. P. Cross.

Sultanas and raisins are included in the discussion of production in 1928-29 (p.2) and prospects of future production (p.5). Tables giving statistics of dried fruit include the following: imports into South Africa, 1927 and 1928 and United States exports to South Africa 1924 to 1928, of raisins; and South African production and exports in 1928-29 and exports from the Union of South Africa, January-September, 1928 and 1929, of raisins and Sultanas.

No. 683. 1930. Markets for fruit juices and fruit sirups in Continental Europe.

"The data in this bulletin, submitted by oversea representatives of the Bureau of Foreign and Domestic Commerce, show the status of the market for fruit juices in each country." Grape as a flavor is mentioned throughout.

No. 692. 1930. Salvador as a market for foodstuffs, by H. P. Macgowan.

Contains sections on fresh and dried fruits which discuss the market for grapes and raisins, including figures for United States shipments into Salvador in 1929. Salvador's preferential duty on raisins is given in a table on p. 6.

No. 699. 1930. Australian raisin and currant industry, by E. C. Squire.

"This publication should prove of value to persons interested in the progress of Australia as a competitor of the United States in the world markets for dried fruits."-p.II. Tables give numerous export and import, production, cost of production, return, prices, and other statistics.

No. 702. 1930. Markets for fruit juices and fruit sirups in Latin America.

"The data in this bulletin, submitted by representatives of the Commerce and State Departments in Latin America, show the status of the market for fruit juices and fruit sirups in each country."-p.II. Countries included are Argentina, Bermuda, Brazil, British Honduras, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Mexico, Nicaragua, Peru, Porto Rico, Uruguay, and Venezuela. Grapes are included in tables as follows: c.i.f. Buenos Aires prices of concentrated essences for soft drinks, sirups, and soda waters (p.3); imports of juice into Brazil by country, 1925-1928 (p.6); net prices per kilo of extracts in Costa Rica, taken from a catalogue of a Netherland firm (p.13); Imports of juice into Ecuador by country, 1925 and 1926 (p.17).

No. 704. 1930. Markets for fruit juices and fruit sirups in the Pacific countries.

"The data... were submitted by representatives of the Bureau of Foreign and Domestic Commerce with the exception of the reports from representatives of the Department of State in India and show the trend of the market in each country [Australia, China, Japan, Java, New Zealand, Philippine Islands, Straits Settlements, and India]... for fruit juices and fruit sirups."-p.II. Prices of grape juice per bottle for American brand in Shanghai (p.3) and in Manila (p.8) are included.

No. 724. 1930. Market in Burma for imported foodstuffs, by George J. Haering.

A section on fruits and vegetables gives some figures for prices of grapes and raisins, and makes the following statement "raisins do not appear to have been introduced effectively to the natives and a proper campaign might reveal market potentialities for American products."

No. 737. 1930. Fresh fruit industry of Union of South Africa, by Edward B. Lawson.

"Inasmuch as South African...pears, grapes, and other fresh fruits reach the British market from November to June, offering general competition for United States apples and pears, it is believed that United States exporters of fresh fruit will be interested in this bulletin."-p.II. Tables show the area of vineyards, 1926, and number of vines, 1921, by grape-producing areas of Union of South Africa, and value, quantity, average price per box, 1925 to 1929, and quantity by principal destinations, 1926 to 1929 of exports of grapes from Union of South Africa.

383. United States Department of Commerce, Bureau of the Census.
Biennial census of manufactures 1927. 1497p. Washington, D. C.
1930. 157.41 Sp3Mf

The following statistics are included in lists of manufactured products: value of grape juice, by States, 1925 and 1927 (p.35); and quantity and value of raisins for the United States, 1923, 1925, and 1927 (p.69), and by States, 1927 (p.75) which gives figures for California only (none reported from other States). Quantity and value of raisins for the United States and California, 1927 are the same. For similar figures for raisins see Census of Manufactures, 1921, (containing figures for 1914, 1919, and 1921) 1923 (containing figures for 1919, 1921, and 1923) or 1925 (containing figures for 1921, 1923, and 1925).

384.

United States census of agriculture, 1925. 3 pts. Washington,
D. C. 1927. 157.41 C332

Contents: Pt. I. The Northern States.- Pt. II. The Southern States. Pt. III. The Western States.

Tables show for the year 1924 the following: number of grape vines of all ages by geographic divisions and by States (p.48-51 in each volume), and by counties under each State except Montana and Wyoming (Pt.III); and number of farms reporting vines by geographic divisions and by States (p.60-67 in each volume), and by counties under each State.

Statistics showing the number of grape vines 1924 compared with 1909 and 1919 are given for the following States: Pt. I. New York, Ohio, Pennsylvania, Indiana, Iowa, Kansas, Maine, Michigan, Minnesota, Missouri, Nebraska, and New Jersey; Pt. II. Oklahoma, Maryland, Florida and Arkansas; and Pt. III. Idaho, Arizona, Nevada, Washington, Oregon, and California.

Number of grape vines and number of farms reporting vines, 1924, by geographic divisions and by States also contained in the following: United States Department of Commerce. Bureau of the Census. United States Census of Agriculture, 1925. Summary statistics by States. Final figures. 149p. Washington, 1928. 157.41 C332S

385. United States Department of Commerce, Bureau of Standards.

Federal and State laws relating to weights and measures. 3d ed... rev. by William Parry... under the direction of F. S. Holbrook. U. S. Dept. Com., Bur. Standards. Misc. Pub. 20, 976p. 1926. 157.88 M68

This book contains the United States Standard Container Act (39 Stat., ch. 426, p.673) with rules and regulations of the Secretary (U. S. Dept. Agr. Circ. 76) and State laws relative to standard containers (capacities and dimensions, how marked, etc.) for grapes are given for California, Indiana, Iowa, Kansas, Michigan, New Jersey, Ohio, and for the District of Columbia. See Index p.957.

A table (p. 937) indicates bushel weights established for grapes in the following States: Alabama, Iowa, Kansas Nebraska, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee and West Virginia.

386. United States Department of Labor, Bureau of Labor Statistics.

Retail prices 1890 to 1928. U. S. Dept. Labor, Bur. Labor Statis. Bul. 495, 219p, 1929. 158.6 B87[R]

Raisins are included in tables as follows: average retail prices of five food articles in the United States, annual average 1915 to 1918, and annual and monthly average 1919 to 1928 (p.50-51); and average retail prices of specified food articles in each of 51 cities, 1913, 1927, and 1928, and each month of 1927 and 1928 (p.54-155).

Similar statistics are included in earlier bulletins of this series. 1920 to 1927 are bulletins, 300, 315, 334, 366, 396, 418, 445, and 464.

The figures in these publications may be supplemented by the publication entitled, Prices Wholesale and Retail, also issued by the Bureau of Labor Statistics and published monthly. Raisins are included in tables giving average retail prices of food by cities, and percentage of increase or decrease for current month, previous month, and current month of previous year, and current month compared with the same month for a series of preceding years, and percentage of increase of each specified year compared with the same month in 1913.

387.

Wholesale prices 1929. U. S. Dept. Labor, Bur. Labor Statis.

Bul. 521, 83p. 1930. 158.6 B87Wh

Average monthly price per pound, wholesale, and index number of wholesale price, 1929, of cleaned currants and seeded coast raisins in New York are given in tables of wholesale prices of commodities (p.23 and 42).

Wholesale Prices 1913 to 1928, Bulletin No. 493 of the Bureau of Labor Statistics, contains coast seeded and London layer raisins, and cleaned and uncleaned currants, price per pound in New York, in tables giving average wholesale prices of commodities yearly 1913 to 1928, and monthly 1927 and 1928, and relative price for each year or month as compared with the price in 1926.

Similar statistics are given in earlier bulletins of the wholesale price series. 1920 to 1927 are Bulletins 296, 320, 335, 367, 390, 415, 440, and 473.

Detailed price figures are published in the monthly publication entitled Wholesale Prices of Commodities, also issued by the Bureau of Labor Statistics. Raisins and currants are included in tables giving wholesale prices and index numbers of commodities, including current month, previous month, and current month of previous year. Annual figures are given in the December numbers.

388. United States Federal Farm Board.

Annual report... for the fiscal year ending June 30, 1930. 75p.

Washington, D. C. 1930. 166 An7

Under the section on the development of cooperative marketing associations is a brief account of the organization of the California Grape Control Board Ltd. An appendix, p.71-73, includes grapes and raisins as one item in tables arranged by commodities as follows: disposition of applications (number and expressed in dollars) and amounts of commitments, advances, approved and canceled, net commitments, repayments, balances outstanding, and balances of commitments available for advances, in connection with loans under the provisions of the Agricultural Marketing Act, as shown by the records of the Treasurer's office, Federal Farm Board, as of June 30, 1930.

389.

Complete and official announcement by C. C. Teague... of a grape industry plan for the grape growers of California. U. S. Fed. Farm Bd. Inform. Release 30, 6p. 1930. Mimeographed. Assoc. File.

Presented to a mass meeting of producers in Fresno, Calif., March 12, 1930.

390.

Grape cooperatives in northeastern states. 2p. Washington, D. C. 1931. (Press service no. 2-32) Mimeographed.

The facts contained in this report made public on August 27 on the cooperative associations handling grapes in the twelve northeastern States were revealed in a survey conducted jointly by the Federal Farm Board, State agricultural colleges, experiment stations, extension services and departments of agriculture.

The report contains a statement to the effect that "Details of the survey made in each of the twelve states will be published by the agricultural colleges."

391. United States Federal Trade Commission.

Annual report... for the fiscal year ended June 30, 1920. 192p.

Washington, D. C. 1920. 173 F32A

Report to the Attorney General in re California Associated Raisin Co. (dated June 8, 1920), p.183-192.

392. United States Interstate Commerce Commission, Bureau of Statistics.

Freight commodity statistics, Class I steam railways in the United States, year ended December 31, 1929. 133p. Washington, D. C. 1930. 168 F88

"This tabulation of commodity statistics for the calendar year 1929 is the sixth in a series based on quarterly reports made by Class I steam railways (those with annual operating revenues above \$1,000,000) to the Interstate Commerce Commission... The

general grouping of commodities remains undisturbed throughout the series. In the present issue a table showing the average carload for each class and group [including fresh grapes] of carload traffic originated [by regions] has been included. A table previously shown giving the relation of tonnage originated and terminated to the total tonnage carried has been omitted."

p.3.

Other tables which include fresh grapes give, by regions: freight traffic (number of carloads and tons) originated, terminated, and total carried, and freight revenue; and number of tons of revenue freight, and freight revenue for each Class I railway.

393. United States Tariff Commission.

Comparison of imports and consumption. 66p. Washington, D. C. 1930. 173 Cl7Ci

Grapes and raisins are given in a table (p.26) showing commodities dutiable under H. R. 2667 as passed by the House of Representatives of which imports were less than 10 per cent of domestic consumption in 1927. Domestic production, imports for consumption, production plus imports, domestic exports, apparent consumption and ratio of imports to consumption are given in pounds and value.

394.

Comparison of rates of duty in the tariff act of 1930 and in the tariff act of 1922. A statement showing the comparative rates of duty and equivalent ad valorem rates in the tariff act of 1930 and in the tariff act of 1922, based upon imports for consumption during the calendar year 1928, arranged according to schedules, paragraphs, and items. 176p. Washington, D. C. 1930. 173 T17Com

Grape juice, grape sirup, etc., p.51; Grapes and raisins, p. 45; Currants, Zante or other, p.45.

395. United States Treasury Department, Bureau of Prohibition.

Statistics concerning intoxicating liquors, Jan., 1930. 73p. Washington, D. C. 1930. 151.5 St21

Compiled under the direction of the Commissioner of Prohibition.

Tables include information covering the fiscal years ended June 30, as follows: Quantities of raisins used for the production of distilled spirits, 1901 to 1929; amounts of wine, by States, 1929, reported by permit holders as sold on physician's prescriptions on Form 1403 (totals 1922 to 1928), used in manufacturing and compounding (totals 1922 to 1928); tax-paid wine received by physicians, hospitals, etc., (totals 1923 to 1928); still wines (totals, 1921 to 1928) and champagne, sparkling wines, and artificially carbonated wines (totals 1922 to 1928) deposited in, withdrawn from and remaining in bonded wineries and bonded storerooms; and wine seized by Federal prohibition directors and by prohibition administrators; amount of still wines remaining in bonded wineries and bonded storerooms on June 30, 1929, by States and kinds; productions and removals,

amounts on hand in bonded wineries, and revenue from taxes on 1918 to 1929, quantities shipped or delivered for sacramental purposes, by States, 1922 to 1929; and imports as shown by reports of the Bureau of Foreign and Domestic Commerce, 1914 to 1929.

A publication of the same title, compiled under the direction of the Commissioner of Internal Revenue, February, 1927, contains similar statistics covering the year 1926, with totals for preceding years.

396. Vandenburg, J. T., jr., and Scoville, G. P.

Growing and marketing grapes in Erie County, Pennsylvania. Penn. Agr. Expt. Sta. Bul. 260, 40p., illus. State College. 1930.

"This bulletin summarizes the data obtained in Erie County, Pa., in an economic study of the grape-growing industry made by the Bureau of Agricultural Economics, U. S. D. A., in cooperation with the Pennsylvania State College, Cornell University, University of Arkansas, and Michigan State College. It is based on records obtained during May and June, 1929, from 102 farms with 5 acres or more in grapes. Tables are included and discussed showing the costs of production and marketing and the relation of age of vineyard, number of bearing vines per acre, training systems, soil improvement and tillage practices, use of horses or tractors, methods of hauling and selling, size of farms, etc., to yields, costs, and returns." Expt. Sta. Record 64:87-88, 1931.

397. Virginia Department of Agriculture, Division of Agricultural Statistics.

Virginia farm statistics, 1925-1929. Va. Dept. Agr. Div. Agr. Statis. Bul. 3-7. Richmond. 1926-1930. 2 V812

Compiled jointly with the Bureau of Agricultural Economics, United States Department of Agriculture.

Each year contains a table giving a summary of United States crops, including production in tons and farm price December 1 per unit and total farm value based on December 1 farm price of grapes for the year covered and the year preceding. The figures are revised in each issue, i.e., the 1928 figures contained in the Virginia farm statistics for 1928 are revised in the 1929 issue.

1929 also includes grapes in a table for Virginia, principal crops. This gives production in pounds and farm value per unit and total, December 1, of grapes, 1927-1929.

398. Warren, G. F.

Prices of farm products in New York. N. Y. Cornell Agr. Expt. Sta. Bul. 416, 63p. Ithaca. 1923.

Tables 16-17 contain data on farm products, the data on grapes as follows: prices paid to producers of farm products in New York as reported by the United States Dept. of Agriculture, for the months of September, October, and November, 1910-1920, with yearly averages, and 5-year average, 1910-1914, also for December

1911, 1912, 1914, 1916, and 1919, for August, 1913 and 1915, and for July, 1912; and index numbers of prices paid to producers of farm products in New York, for the months of September, October, and November, 1910-1920, with yearly averages.

399. Washington State Department of Agriculture, Division of Horticulture.
Washington standards for grading, packing, certification and packages of apples, pears, and other fruits, season 1927. 40p. Olympia, Jay Thomas, public printer [1927]. Pam. Coll.
Washington State grades for grapes, season of 1927, p.27-30; Official standards of Washington grape baskets, p.34.

400. Wellington, Richard.
Vinifera or European grapes in New York. N. Y. State Agr. Expt. Sta. Circ. 101, 7p. Geneva. 1928.

"The European grape cannot yet be considered a commercial grape in New York, owing to its susceptibility to winter injury, but it can be grown with a fair degree of success providing proper varieties and vigorous root stocks are selected." -p.1. The varieties found best suited to New York are listed.

401. Wells, Richard.
Grape madness in California. Country Gent. 87 (11):6-7, illus. Apr. 22, 1922. 6 C833

The author quotes various shipment, price, land valuation and planting figures to show the "wave of speculative excitement" in the grape industry in California during the past two years, particularly in 1921, with some predictions for the future.

402. Wertz, V. R.
Estimated income from the Ohio agricultural industry. Ohio Agr. Expt. Sta. Bul. 450, 37p. Wooster. 1930.
Bibliography, p.37.
Table 5 (p.12-13) gives five-year average gross cash income, from the Ohio agricultural industry, by sources, including grapes, 1924-1928.
Table 15 (p.28) gives fruit (including grapes) sold from Ohio farms estimated gross cash income, 1920-1928, with 9-year average and percentage.

403. West, C. J.
Ohio commercial orchards and vineyards. Ohio Dept. Agr. Spec. Bul. April 1, 1926, 39p. Columbus. 1926. 2 Ch320
United States Department of Agriculture, Bureau of Agricultural Economics cooperating. Tables give statistics relative to acreage and age of vines in commercial vineyards, by counties and townships, and commercial production (in tons and acres) of grapes in Ohio, by counties, for the years 1921, 1922, and 1923, by varieties, as enumerated in a special survey in 1924, p.34-37.

404. Western Canner and Packer [monthly] v.7, no.5 - v.23, no.3, Oct. 1915-
July 1931. San Francisco. 1915-31. illus. 286.83 W522
Dec. 1926. (v.18, no.8) absorbed Packer and Canner.

This set is not indexed.

"A trade journal devoted to the industries and trade in canned and cured food products in the eleven western states... A source of centralized statistics on the pack, stocks and market outlook... and on foreign trade and prices." - A Survey of Economic Research and sources of data regarding California published by the California Development Association, p.29.

Annual statistical numbers are to be found in the February issues 1916-1925, in March issues 1926, and 1929-1931, and in April issues 1927 and 1928.

These contain similar statistics throughout. The later issues, however, contain more complete data than the earlier ones. Most of them give imports and exports from California and Pacific Coast ports, including raisins; statistics of canned and dried fruit packs, including grapes and raisins; opening prices of canned fruit, including grapes; and monthly rail shipments from California points, including raisins.

The 1930 Statistical review number, v.22, no.12, Mar. 20, 1931 contains the following: 1930 production of canned and dried foods in the West, including production of canned grapes and raisins in California; 1930 opening prices of western canned fruits and vegetables including grapes in opening prices of California canned fruits; opening prices of California canned fruit including Muscat grapes no. 2 1/2 and no. 10 cans, 1923-1930 and no. 1 T and no. 2 T, 1922-1930; relative importance of California packs by percentages 1927-1930, including grapes; comparative case packs of California canned fruits 1915-1930, including grapes; 1930 estimated dried fruit tonnage, including raisins for California; Australian dried fruit tonnage, including currants, Sultanas, Lebias, and Muscatels, 1928-1930 from New South Wales, Victoria, and West and South Australia; average shipping weights of dried fruits, including bulk and layer and cluster raisins and seeded and seedless raisins in cartons and raisins in tins; exports of dried fruits from the United States, crop years 1924-1929 and six months ending December 31, 1927-1930, including raisins, by countries; production of raisins in California and in foreign countries 1924-1930 and percentage of California crops exported; exports of canned and dried foods from the Pacific Coast 1927-1930, including pounds and value of raisins from Districts of San Francisco, Los Angeles, and Washington; world production of raisins, by countries, 1921-1930; estimated consumption of dried fruit, including imports, exports total and per capita consumption of raisins 1921, 1923, 1925, and 1927 and of currants, 1923-1927, also production of raisins; California crop production, bearing acreage 1930, total production, farm value, and value per acre 1929 and 1930, including grapes and

raisins, by classes; California dried fruit output in tons, 1924-1930, including raisins; and rail shipments, by months, of canned and dried foods from California 1926-1930, including raisins.

The monthly numbers include raisins in tables of monthly exports and raisins and currants among imports, districts of San Francisco, Los Angeles and Washington, consistently throughout the set, as well as other statistics.

Various items of interest relative to the raisin industry include statistics of production, detailed statistics of prices, such as packers' quotations, opening prices, prices offered by cooperative associations, and growers' prices, etc. This information beginning with v.18, 1926-27 is contained primarily in a monthly department entitled Dried Fruits.

Changes in transportation rates and tariff changes appear irregularly. The later volumes contain more long articles than do the earlier ones.

405. Wheeler, L. A.

International trade in dried fruit. U. S. Dept. Com., Bur. Foreign and Dom. Com., Trade Prom. Ser. 44, 113p. 1927. 157.54 T67.

"It is the purpose of this report to present the principal facts in connection with the production of dried fruit in all the important producing countries, together with an analysis of the dried-fruit trade of the world from the point of view of the importing as well as the exporting countries. A study is also made of the characteristics of the principal markets for dried fruit.

"The material in this report is based largely upon the official trade and production statistics of the countries concerned, where these are available, and reports which have been received in the Bureau from foreign representatives of the Departments of Commerce and State."p.VIII.

The section entitled Raisins and currants, p.4-39, deals with producing areas, varieties and quality, factors affecting production, drying and curing, marketing, processing by packers, exports, etc. of raisins in the United States, Smyrna, Spain, Persia, and Chile, and of raisins and currants in Greece, Australia and the Union of South Africa. Pages 34-39 deal with principal markets for raisins and currants, and there are two paragraphs on raisins and other dried fruit in Argentina on p.34. Various tables give import, export and production statistics.

A table, p.1, gives estimated acreage of principal fruits (including raisin grapes) used for drying in California, 1926, and a table, p.2, gives production, exports, imports, consumption, and per capita consumption of dried fruit (including raisins) in the United States (1921-1925 average).

Other tables, p.98-113 include raisins and currants along with other dried fruit, in thousands of pounds, as follows: imports into and reexports from the United Kingdom, imports into Germany, France, the Netherlands, Belgium, Denmark, Sweden, Norway, Finland, Switzerland (raisins only), Argentina, and New Zealand, and exports from the United States to China, average 1909-1913, and 1921 to 1925; imports (raisins only) into Poland, 1924 and 1925; imports into Canada,

average 1910-1914, and 1922 to 1926, fiscal years ended March 31; and imports into Egypt, 1921 to 1925. In addition to currants, Sultananas are listed separately from other raisins for Egypt; for Argentina, currants and Sultananas are given together, with raisins separately; and for France and Finland currants and raisins are given together.

406. Wickson, E. J.

California fruits and how to grow them. A manual of methods which have yielded greatest success, with the lists of varieties best adapted to the different districts of the state. 9th ed., fully rev. 508p. San Francisco, Pacific Rural Press. 1921. 93 W63c

The grape industry of California-area, soils for grapes, length of season, and shipping grapes in sawdust, p.288-291; Grape varieties in California, p. 318-323; How raisins are made-- Muscat and dipped seedless, p.465-466.

Tables give the following statistical information: California canned product fruit (including grapes) 1913, 1919 and 1920 (p.543); production of California cured fruits in tons, (including raisins) 1890, 1895, 1900, 1905, 1910-1920 (p.455); shipments of fresh fruits (including grapes) beyond State lines by rail, in actual carloads, 1910-1920 (p.50); acreage, valuation, and production of California fruits (including table, raisin and wine grapes) for 1920 (p.51); and comparative value of 100 pounds of fruit and equivalent in pounds of hay, grains, meals, etc. (including grapes and raisins) (p.499).

407. Wiggans, C. C., and Hoppert, E. H.

Grape growing in Nebraska, Nebr. Agr. Col. Ext. Circ. 1257, 22p. Lincoln. 1925.

Varieties, p.5-6; harvesting and packing, p.19-20.

408. Winkler, A. J.

Berry thinning of grapes. Calif. Agr. Expt. Sta. Bul. 492, 22p. Berkeley. 1930.

During an investigation made by the Division of Viticulture of the University of California in 1928 and 1929 with Tokay and Malaga grapes, to obtain information concerning the effects of berry thinning on color and development, certain data were gathered on the cost of berry thinning and probable returns incident, such as the facilitating of harvesting and packing and improved quality of fruit.

409.

Sulphur dioxide and the decay factor in shipping fruit. Calif. Countryman 13 (5):9, 19-20. Mar., 1927. 6 Un34

An account of investigations with sulphur dioxide in the shipment of grapes, by the Division of Viticulture at Davis, includes a description of commercial methods of treatment found practical, sulphuring with liquid sulphur dioxide, and an enumeration of "some of the requirements which experience has shown, must be met if uniformly good results are to be obtained."

410. Winkler, A. J., and Jacob, H. E.

The utilization of sulfur dioxide in the marketing of grapes
Calif. Agr. Expt. Sta. Hilgardia 1 (6):107-131. 1925.

This bulletin consists of an investigation made by the College of Agriculture "to determine (1) the possibility of preserving grapes fresh in sealed containers by means of preservatives so that they will be suitable for manufacturing purposes for several months after their removal from the vines and (2) the possibility of retarding spoiling under the present system of refrigerator car transportation, by means of chemical preservatives with a view to placing the grapes on the Eastern markets in better condition." Tests were made with various preservatives with the result that all "except sulfur dioxide were soon discarded as unpromising."

411. Woodward, L. H.

Grape industry of western New York. Amer. Fruit Grower 42 (10): 3, 19. Oct., 1922. 80G85

The subdivisions of this article are as follows: Best varieties; Difficulties of inspection; Marketing the crop; Transportation facilities; Decline in yields; Cooperative marketing; and Poor market reports.

412.

Selling grapes to tourists: A grape belt farmer's methods, varieties, culture, and harvesting. Rural New Yorker 85 (4905): 949-950. June 26, 1926. 6R88

Contains several paragraphs on varieties and amounts sold at the roadside stand of the farm of Mr. Fred Nichols, Chautauqua County, New York.

413. Wright, I. E., comp.

Oklahoma; an index to the state official sources of agricultural statistics... including a list of unofficial sources of Oklahoma agricultural statistics, compiled by Margaret Walters. U. S. Dept. Agr., Bur. Agr. Econ., Agr. Econ. Bibliog. 21, 460p. 1927. Mimeographed.

For sources of statistics of acreage, price, production, number of vines, shipments, and value of grapes; production of grape juice and of wine and grape juice; and price, production and value of wine, see p. 62-68.

414. Wright, R. C., and Taylor, G. F.

The freezing temperatures of some fruits, vegetables, and cut flowers. U. S. Dept. Agr. Bul. 1133, rev., 8p. 1929.

Freezing points of seven American and two European varieties of grapes are found on p. 4-5.

415. Wyant, E. V.

Grape growing in Yakima Valley. Wash. State Hort. Assoc. Proc. 1925: 95-96. 81 W273

A general discussion of the growing of grapes with suggestions as to the proper time for picking. A few shipment figures are also included.

416. Young, W. T.

Muscadine grapes. Culture and varieties. S. C. Agr. Expt. Sta. Bul. 205, 47p. Clemson College. 1920.

Literature, p.47-48; harvesting and handling the crop, p. 23-24.

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